

ACORN USER

TEST OUT
PROARTISAN 2



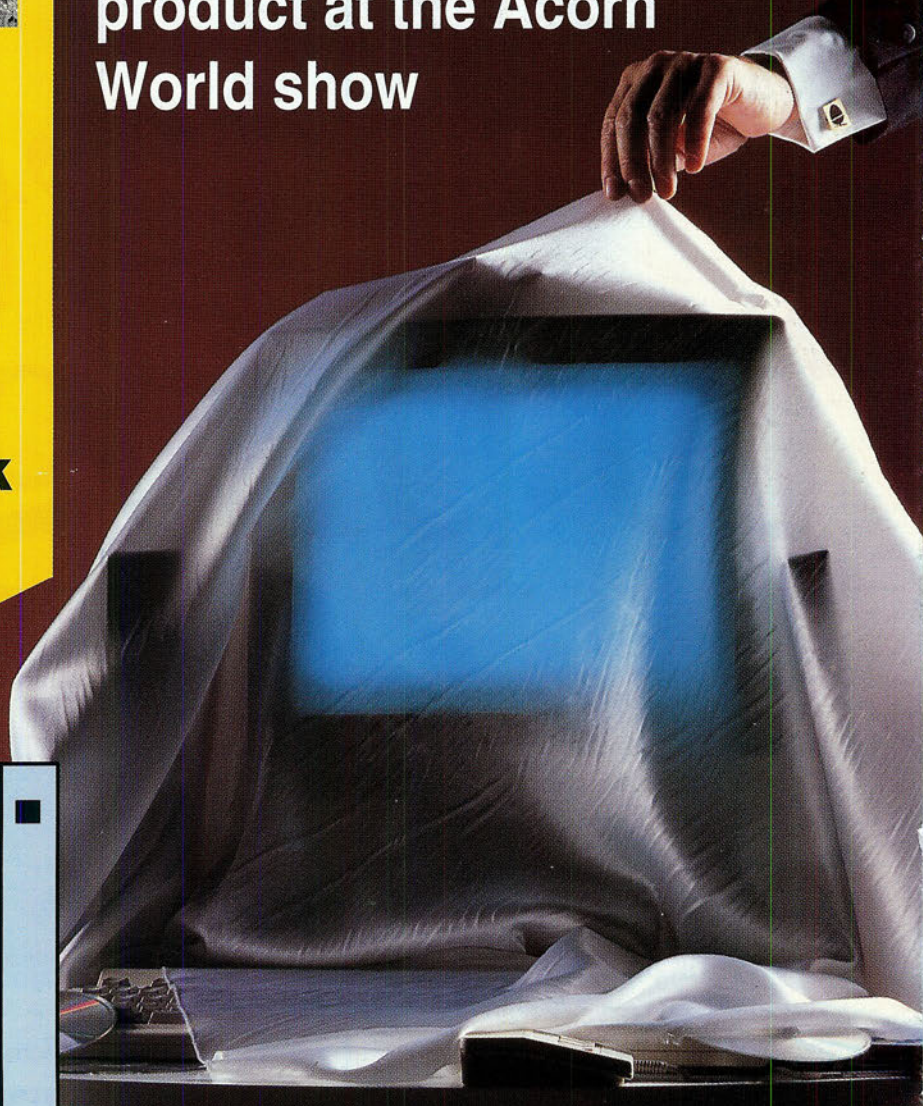
**The
graphics
release of
the year**

PLUS

**Part three of Omnidesk
Heimdall mini-game**

Exposed!

We unveil every new
product at the Acorn
World show



**NO COVER DISC?
Ask your newsagent**

£2.95 NOVEMBER 1993

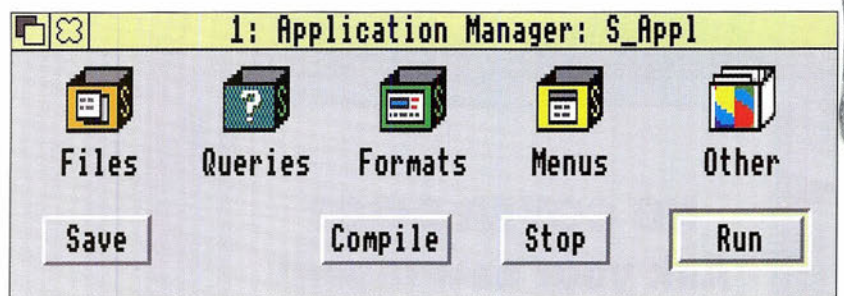
ISSN 0263-7456



9 770263 745031

The only Programmable Database that you **don't** have to program.

Introducing SAM — the S-Base Application Manager. SAM makes the most powerful RISC OS database also the easiest to use. Absolutely no programming is required — just drag in a CSV file and two clicks later you can have a working database. No matter how demanding your data processing needs, S-Base 2 will provide the total solution.



Also new in S-Base 2:

- Natural language Query by Example (QBE) for superfast access to data.
- Enhanced multimedia support, including Acorn Replay Digital Video files.
- Greatly enhanced documentation, with a new quickstart guide.
- Full free text support.

- Picture number formatting.
- Around 150 new commands, functions and operators.

The Developer versions also include:

- Intelligent on-line help.
- Drag-and-drop import of DBase III and Squirrel files.
- The complete source to a powerful multimedia application.



S-Base 2 Personal Edition — £129 • S-Base 2 Developer Edition — £249

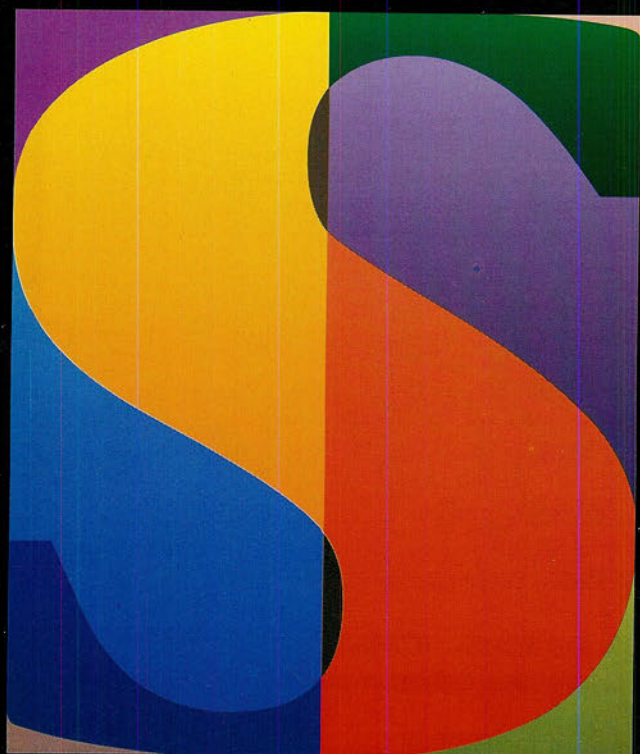
Upgrades available to registered S-Base users.

For further product information, please contact us.

LONGMAN LOGOTRON

124 Cambridge Science Park, Milton Road, Cambridge CB4 4ZS. • Tel (0223) 425558 • Fax (0223) 425349

FA



Y

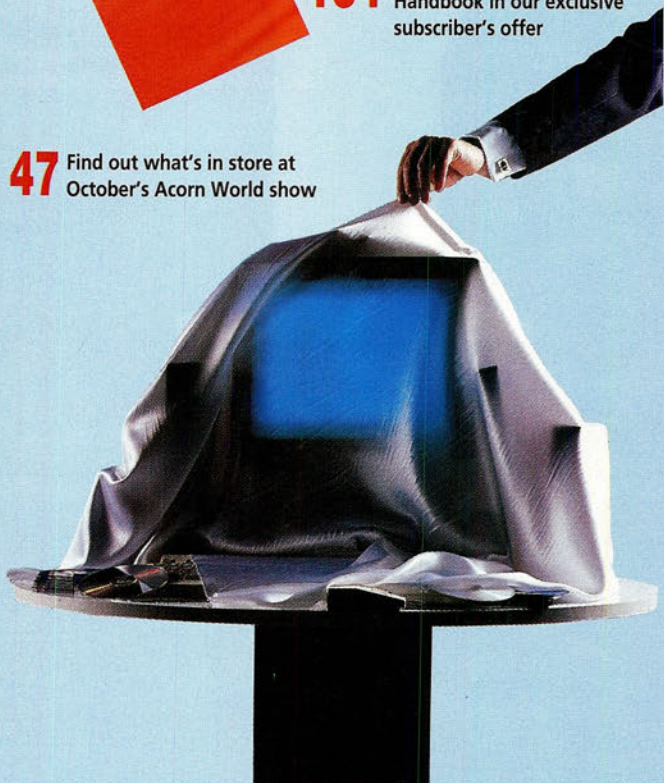
CONTENTS

7 Unwrapped! The best deal ever from Acorn



134 Get the definitive Acorn User Handbook in our exclusive subscriber's offer

47 Find out what's in store at October's Acorn World show



REGULARS

- 7** News
- 24** The Acorn User Disc
- 15** Graphics
- 16** Comms
- 19** Public Domain
- 20** Education
- 90** Letters
- 123** Learning curve
- 130** Next month
- 134** The subscriber's page
- 136** The Moxon interview

HANDS ON

- 105** Questions and answers
An answer to all your questions
- 109** Back to basics
- 113** *INFO

FEATURES

- 34** Digitiser
Ten useful ideas on employing your classroom digitiser



Published by Redwood Publishing, a BBC Enterprises Company, 101 Bayham Street, London NW1 0AG. Tel: 071-331 8000. Fax: 071-331 8001. Typesetting and colour by Trumps Studio, Ware, Herts. Printed by Cradley Print Ltd, West Midlands. Distributed by BBC Frontline, Park House, 117 Park Road, Peterborough. © Redwood Publishing 1993. All rights reserved. Acorn is a registered trademark of Acorn Computers Ltd.



Redwood Publishing is a registered data user. ISSN 0263 7456.

Editor Karen Donaghay
Technical Editor Mark Moxon
Production Editor John Rennie
Art Editor Tony Judge
Contributing editors
 Ian Burley (News) Sam Greenhill (Games)
Advertisement Manager
 Richard Power
Sales Executive
 Jonathan Hull

Promotions Executive Jane McCann
Ad Production Controller Fiona Senior
Production Controller Fiona Andrews
Ad Services Manager Ray Kelly
Managing Director Michael Potter
Editorial Director Christopher Ward
Publishing Director Seamus Geoghegan
Publisher Robert Marriott

Reader services department:
 071-331 8022
Cover Peter Dazeley
Subscription enquiries and back copies: (0483) 727762
Annual subscription rate:
 £35.40 including free gifts. Please refer to page 134 for details.
 Bring this issue to the Acorn User stand at Acorn World for a mystery gift...

REVIEWS

30 Photo call

From celluloid to CD-Rom disc with Kodak's Photo CD

65 Games Show

94 The main Event

Get organised with Event, a diary with a difference

97 A Vigil to keep

All the features that a programmer needs

99 In Brief

The latest programming guide plus a look at Hatchback

100 State of the art

Read our verdict on graphics release, ProArtisan 2

SHOW GUIDE

47 Show introduction

What to see and where to go

48 New releases

51 Show stands

Your stand-by-stand guide to who's where

58 Show games

The most exciting games releases, to debut at the show

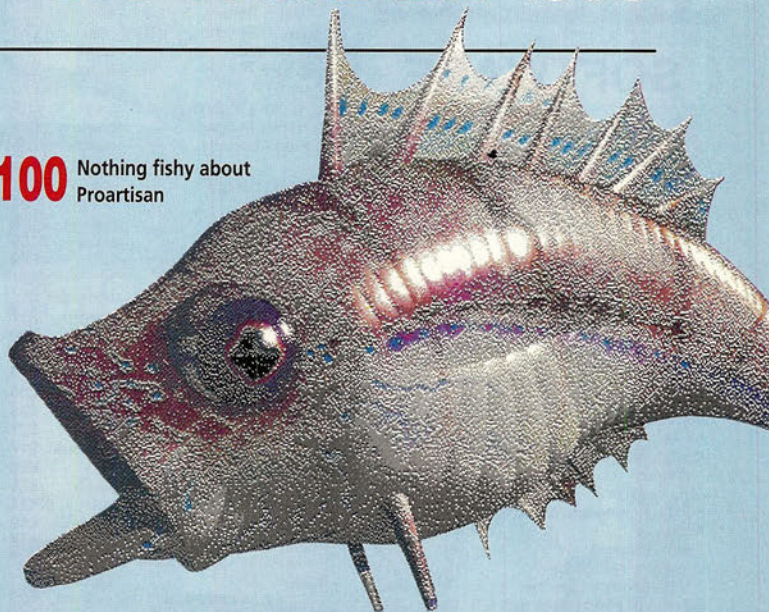
61 Walk around the world

How to get the best from the Acorn World show

63 Win everything you always wanted

...with our fabulous show competition

100 Nothing fishy about Proartisan



65 Serious seppuku with those remorseless rodents in Lemmings 2. Put the gore back into racing with Stunt Racer 2000... And more



34 Let your imagination run wild. Alter found images with digitising



Editor's letter

There's so much packed into this month's issue, that it is hard to know where to begin. For many the highlight of the year will be all those new products for the Acorn World show – over 50 releases at the last count. See our exclusive show coverage for full details. Also this month, the fastest-ever Acorn machine was announced. At the same time, Acorn launched a new price-cutting campaign – providing the cheapest-ever Risc machine. Finally, there is the premiere of PhotoCD, an exclusive review of the graphics package ProArtisan 2 and all of our regulars.

Karen Dnaphay

EXCLUSIVELY PRODUCED ON ACORN MACHINES

All the editorial pages in BBC Acorn User are produced using Acorn computers, Computer Concepts' Impression 2, LaserDirect printers and Taxan monitors

SOFTWARE

1 out of 10	10 out of 10
– Early Essentials (-6), English (6-16), Maths Algebra, Maths Number (6-16)	each £19
– French, German, Italian, Junior Essentials, Science, Spanish	each £POA
1st Paint	Resource £34
1st Word Plus Manual	Acorn v0 £10
2 067 BC	Oregon £18
2067 BC + Entropy	Oregon £26
3 3000 Technical Reference Manual	Acorn v0 £33
A3010 Stick Control	Arm_Tech £17
A4 Technical Reference Manual	Acorn v0 £67
A5000 Technical Reference Manual	Acorn v0 £67
ABC Version 3	Oak £79
Acheton / Kingdom of Hamil	Topologika £17
Accounts	ACS £245
Acorn Advance	Acorn £88
– Primary Licence	£183
– Secondary Licence	£442
Adventure Playground, age 5-8	Storm £19
Aggressor	Atomic £15
Air Supremacy	Superior £18
Aldebaran	ArcAngels £26
Alerion	Dabs £12
Alien Invasion	Dabs £12
All-In Boxing	Dabs £12
Almanac 2	Stallion £57
AlphaBase	Clares £37
Alpha-Sound	Xavier £29
Alpha-Tracks	Silicon £74
ALPS Adventure Language	
Programming System	Alpine £28
Amazing Maths	Cambridgeshire £19
Amazing Ollie, age 4+	Storm £14
Ancestry, KS3,4	Minerva £59
ANSI C Release 4 User Guide	Acorn v0 £25
Arcade 3	Clares £12
ArcComm 2	Longman £47
ArcDFS	Dabs £22
Arc Embroidery	TechSoft £148
Arcendium	Dabs £12
ArcFAX	David Pilling £19
Archimedes Assembly Language	Dabs v0 £15
– with disc	£22
Archimedes Game Maker's Manual	
	Sigma v0 £15
Archimedes Operating System	Dabs v0 £15
– with disc	£22
Architech	ExpLAN £165
Archivist Pro	Oregon £38
Archway 2	Simtron £78
ArcLight	Ace £51
Arcol Desktop	ExpLAN £49
Accounts Manager	Visionscan £269
ARC-PCB	Silicon £96
– Professional	Silicon £213
– Schematics	Silicon £289
ArcSpell 1	Xavier £29
ArcSpell 2	Xavier £29
ArcTerm 7	Serial Port £59
ARCTiculate	Fourth Dim £19
ARCTist	Fourth Dim £19
ArcTrivia	Moray £21
Arventure – I ... The Romans, age 10-12; II ... The Egyptians, age 8-9; III ... The Vikings, age 7-11 – each	Sherston £30
Armadeus	Clares £59
Armadeus Sampler Board	Clares £123
Artisan 2	Clares £43
Art Machine Pack 1	Topologika £39
Art Machine Pack 2	Topologika £39
ArtSchool	Micro Studio £25
ArtWorks	CC £124
– network licence	£650
– site licence	£545
Astro	Topologika £35
Atelier, KS2-4	Minerva £60
AUN/Level 4 Fileserver	Acorn £395
Avon & Mordac	Topologika £16
Axis	TBA £19
B adger Trails, age 9-11	Sherston £37
Bambuzle + Blitz	Arxe £20
BASIC V	Dabs v0 £10
Basic Wimp Programming	Dabs v0 £POA

OCTOBER 1993

Battlechess	Krisalis £21
Battletank	Minerva £9
BBC Basic Reference Manual	Acorn v0 £22
Beginner's Guide to Wimp Programming on the Archimedes	Sigma v0 £13
Birthday Present	Topologika £POA
Black Angel	Fourth Dim £26
BlowPipe	Leading Edge £14
Bookstore	ESM £37
– Primary, KS1,2	ESM £37
– Secondary, KS3,4	ESM £54
– Welsh Primary, KS1,2	ESM £58
– Welsh Secondary, KS3,4	ESM £78
Break 147 & Superpool	Fourth Dim £25
Britain by Rail	Fisher-Marriott £19
Budget DTP	Dabs v0 £13
Bug Hunter / MoonDash	Minerva £10
Bug Hunter in Space	Minerva £10
Business Accounts	Minerva £275
C (new edition)	Dabs v0 £16
– with disc	£24
CableNews	Lingenuity £128
CADet, KS3,4	Minerva £128
Cambridge Pascal	Oak £79
Cardmania	CIS £POA
Cartoon Collection	Micro Studio £16
Casino	Minerva £11
Castle of Dreams, age 9+	Storm £20
Cataclysm	Fourth Dim £16
Caverns	Minerva £10
C Development System	RISC £66
Chameleon (new version)	4maton £33
Champions Compilation	Krisalis £21
Charts & Graphs	Computer Tutorial £17
ChartWell	RISC £23
Chatter	4maton £35
Chequered Flag	CIS £POA
Chess 3D	Micro Power £19
Children's Graphics	Micro Studio £16
Chocks Away Compendium	Fourth Dim £27
Chopper Force	Fourth Dim £21
Christmas Adventure, age 5-8	Storm £20
Christmas Allsorts, age 7-16	Sherston £16
Chuck Rock	Krisalis £17
Clip Art	Graphics Factory £17
– Vol 1 (General), sprites	£17
– Vol 2 (General) / Vol 3 (Animals) / Vol 4 (Sport) / Vol 5 (Characters)	each £25
Clip Art Set 1, drawfiles	Midnight £26
Clip Art Set 2, drawfiles	Midnight £26
CNC Designer V3 for Lathe	TechSoft £343
CNC Designer V3 for Lathe and Miller	TechSoft £493
CNC Designer V3 for Miller	TechSoft £343
Coffee, age 9+	Storm £28
Colour Screen»Mac	Human £90
– Arc/Mac Cable	Human £24
ColourSep	ICS £15
– site licence	£45
ColourSep Starter Packs	ICS £55
– DeskJet 500 (Mono)	£85
– site licence	£85
– BJ-10 with Cartridges	£85
– site licence	£115
– BJ without Cartridges	£40
– site licence	£70
Compression	CC £30
Computer Basics	Computer Tutorial £17
Concept Designer	Longman £21
Connections, age 5-8	Sherston £27
Control Logo	Longman £22
Converta-Key	Triple R £9
Cops	Alpine £15
Countdown to Doom / Return to Doom / Philosopher's Quest	Topologika £25
Craftshop 1	4maton £19
Craftshop 2	4maton £19
Creator	Alpine £31
Cross-32 Meta-Assembler	Baldon £125
– manual for evaluation	Baldon v0 £134
Crystal Maze	Sherston £35
Crystal Rain Forest, age 8-11	Sherston £35
Curves	Topologika £37
Cyber Chess	Fourth Dim £26
Cyborg	Alpine £19
D arryl the Dragon, KS1,2	4maton £18
– Activity Sheets	£10
DataGraph	Topologika £29
Datapower	Iota £125
DataVision	Silicon £72
DataVision Lite	Silicon £42
DataWord	Triple R £15
DBEdit	4maton £28
Decorated Alphabet, sprites	Micro Studio £17
Demon's Lair	Fourth Dim £20
Designer V3	TechSoft £193
Designer Intro (not OS 3)	TechSoft £75
Designer's Graphics, draw/sprites	
	Micro Studio £16
DeskEdit2	RISC £25
Desktop Assembler	Acorn £119
Desktop C	Acorn £180
Desktop Database	Iota £45
Desktop Folio, KS1-4	ESM £54

Desktop Folio Curriculum Packs, KS2+:	
Christmas, Editors, Maths,	
Space, World War II	each £22
Desktop Folio – Welsh, KS1-4	ESM £82
Desktop Office v2, KS2-4	Minerva £72
Desktop Publishing on the Archimedes	
	Sigma v0 £14
Desktop Thesaurus	RISC £17
Desktop Tracker	Leading Edge £50
Detect-a-Pet, age 5-11	ESM £49
DFS Reader	RISC £9
Digital Symphony	Oregon £41
Disc Rescue	Look £28
DrawBender	ICS £10
– site licence	£30
!Draw_Help, age 13+	Sherston v0 £16
Draw Print & Plot	Oak £35
Dreamwave, age 14+	EMR £34
Droom	Resource £24
Dust	Resource £29
DTP Graphics 1 Mono, sprites	Micro Studio £15
DTP Graphics 2 Colour	Micro Studio £17
DTP Graphics combined	Micro Studio £25
DTP Seeds	4maton v0 £8
Dungeon	Fourth Dim £26
E asiword v2, KS2-4	Minerva £43
EasiWriter 2	Icon £115
– Dictionaries: Danish / Dutch / French / German / Italian / Norwegian / Spanish / Swedish / Swiss German	each £30
Ego: Repton 4	Superior £18
Elite	Hybrid £32
Elucidata (OCR)	Irlam £155
– bought with Irlam Scanner	£79
Enter the Realm	Fourth Dim £18
E-numix	CIS £POA
Equisor	CC £37
Ethnic Borders	4maton £10
E-Type Compendium	Fourth Dim £18
Euclid	Ace £55
Eureka version 2	Longman £99
ExcellonDrill	Silicon £55
Express	Midnight £45
Eye for Spelling, KS1,2	ESM £32
F amily Favourites (not OS 3)	Minerva £11
Farmer Giles	Computer Tutorial £16
Farmer Giles II	Computer Tutorial £16
Fervour	Clares £19
FilmMAKER	Silicon £60
– education price	£49
Find It!	Appian £29
Fireworkz	Colton £165
First Impression	Word Processing £28
First Logo	Longman £22
First Words and Pictures	Chalksoft £21
Fish, Jinxter and Corruption	CIS £POA
Flare	Silica £22
Flexifile, KS3,4	Minerva £69
Flight Path, age 9+	Storm £27
Flight Sim Toolkit	Simis £31
Fontasy	ICS £15
– site licence	£45
Fontasy / DrawBender / Placard	ICS £30
– site licence	£80
Font Directory	Look £28
FontFX	Data Store £9
– site licence	£70
Font Pack – Newhall, Starter, Symbol	
– each pack	Acorn £35
Font Pack 1 – Paladin, Swiss B, Symbol B, Vogue	RISC £47
Font Pack – Avant Garde, Bookman	
– Pembroke – each pack	CC £24
Food for Thought, age 7-16	Sherston £16
Freddy's Folly (not OS 3)	Minerva £8
Freddy Teddy	Topologika £18
– Balloons & The Zoo	Topologika £27
– The Playground	Topologika £27
– The Puddle & The Wardrobe	Topologika £27
Freddy Teddy's Adventure	Topologika £18
Fun School 2	Europress £17
– age -6, age 6-8, age 8+	each £17
Fun School 3	Europress £18
– age -5, age 5-7, age 8+	each £18
Fun School 4	Europress £18
– age -5, age 5-7, age 7-11	each £18
G alactic Dan	Fourth Dim £15
Genesis II	Oak £99
Genesis Plus	Oak £60
Genesis Script Language	Oak v0 £15
GenIndex	Oak £39
GerberPlot	Silicon £54
Giant Killer, age 10+	Topologika £27
Giant Killer Support Disc	Topologika £23
Glimpse	Sherston £10
Gods	Krisalis £19
Good Impression	Word Processing £25
Granny's Garden	4maton £23
Granny's Garden Resource Pack	4maton £15
GraphBox	Minerva £57
GraphBox Professional	Minerva £104
Graphics on the ARM Machines	Dabs v0 £15
Graph.IT	Sherston £19
Greetings Graphics, draw/sprites	
	Micro Studio £16
Gribbly's Day Out	Coin-Age £19
GridIT	Widgit £30
Grievous Bodily 'ARM	Fourth Dim £15

GuardianPro	Digital Phenomena £14
Guile	Dream £22
H ard Disc Companion	RISC £38
Hatchback	4maton £30
Hearsay II	RISC £69
Heimdall	Krisalis £22
HelixBasic	POK £79
!Help 3, age 13+	Sherston v0 £11
HeroQuest	Krisalis £22
Highlighter, age 8-16	Sherston £32
History Costume, sprites	Micro Studio £16
Holed Out Compendium	Fourth Dim £18
Home Accounts	Minerva £34
House of Numbers	Chalksoft £20
Hoverbod (not OS 3)	Minerva £11
Humanoids and Robotix	CIS £POA
I bix the Viking (not OS 3)	Minerva £11
PC SWI	Baldon £15
– bought with Oddule	£5
Illusionist	Clares £69
Illustrators' Graphics, draw/sprites	
	Micro Studio £16
Image Animator	Iota £59
Image OCR	Iota £POA
Image Outliner	Iota £72
Imagery	Palette Studio £65
Imagine Version 2	Topologika £43
Impact!	Circle £47
Impact! Demo	Circle £22
Impression	CC £120
– network version	£650
– site licence	£545
– extra hardware key for sites only	£15
– extra manual for sites only	v0 £8
Impression	Dabs v0 £14
– with disc	£17
Impression Borders	CC £19
Impression Business Supplement	CC £39
Impression Junior	CC £65
– site licence	£435
– extra manual for sites only	v0 £7
Impression Publisher	CC £POA
Impression Style	CC £POA
Insight	Longman £61
Instigator	Dabs £36
Interdictor 2	Clares £26
IronLord	UBI Soft £14
Isca – Life in a Roman Town, KS3	ESM £34
Isle of Wight	Computer Tutorial £20
Ixon	Software 42 £21
J ames Pond	Krisalis £19
Jet Fighter	Minerva £10
Jiglet	4maton £19
Jigsaw	4maton £19
Junior Database	Iota £45
Junior PinPoint	Longman £20
K arma	Periscope £20
Keyboard Player	Chalksoft £17
Keylink Prolog	Keylink £69
KiddiCad	Oak £59
Kid Pix, KS1,2	ESM £35
Killerbugs	CIS £POA
Killerbugs, Serpents & Humanoids and Robotix	CIS £POA
Knowledge Organiser 2	Clares £79
Krisalis Collection	Krisalis £21
L abelBase	Digital Phenomena £49
Landmarks – Aztecs, Civil War, Columbus, Egypt, Elizabeth I, Rain Forest, Second World War / Victorians	each Longman £18
Last Days of Doom & Hezarin	Topologika £17
Last Ninja	Superior £19
Lemmings	Krisalis £19
Letters and Pictures	Chalksoft £18
Lexicon – French, German – each	Stallion £48
Lexicon – Russian	Stallion £56
Limpets	Computer Tutorial £17
Linkword – French, German, Spanish	
– each	Minerva £34
Little Red Riding Hood, age 5-8	Selective £13
Logo	Longman £55
LogoPlotter	Longman £20
Lotus Turbo Challenge 2	Krisalis £19
M addingly Hall	Minerva £8
Magpie	Longman £40
Mah-Jong, Crisis & Fireball	CIS £POA
Manchester United Europe	Krisalis £19
Maps and Landscapes 1	Chalksoft £19
Maps and Landscapes 2	Chalksoft £19
Mark Master	Chalksoft £67
Master Break	Superior £14
Masterfile (Version 3)	RISC £43
Maths Sieve	Computer Tutorial £16
Mayhem	CIS £POA
Mayhem, CardMania, E-Numix	CIS £POA
Mazes, drawfiles	Micro Studio £16
Mental Maths & Memory Magic	CIS £POA
MicroDrive Designer	CIS £POA
MicroDrive Designer, MicroDrive II & Chequered Flag	
MicroDrive II	CIS £POA
Micro Music	Fisher-Marriott £19
MicroSpell 3.XX	David Pilling £5
MicroStudio, age 7+	EMR £67
Micro Trader Accounts	PRES £270

POSTAGE IS FREE FOR CASH CUSTOMERS IN THE UK

MitG-29 Fulcrum	Domark	£22
Military History, sprites	Micro Studio	£16
Minotaur	Minerva	£8
Missile Control	Minerva	£8
Mogul	Ace	£25
Money Matters	Triple R	£15
Monotype Fonts (Pack 1)	Look	£77
Morpheus	Oregon	£30
Movaword	Chalksoft	£17
MultiFS	Arxe	£27
MultiStore, KS3,4	Minerva	£105
Myth of Moby Dick	Topologika	£27

Nature Graphics, draw/sprites

Naughty Stories (set of 6)	Sherston	£48
Navigator	Topologika	£44
Nebulus	Krisalis	£19
Newton	Longman	£17
Night Sky	Clares	£67
Noddy's Playtime	Jumping Bean	£19
Noot	4maton	£41
Noot Art Disc	4maton	£10
Notate	Longman	£42
Note Invaders	Chalksoft	£20
Number 62 HoneyPot Lane	Resource	£29
Numbers and Pictures	Chalksoft	£18
Numberscope	Fisher-Marriott	£19
Number Zoo, age 3-6	Selective	£14
Numerator	Longman	£34
Numerator Chaos	Longman	£18

Oak Logic	Oak	£79
Oak PCB	Oak	£79
Oh No! More Lemmings (requires Lemmings)	Krisalis	£15

Ollie Octopus' Sketchpad

age 4+	Storm	£12
Omar Sharif's Bridge	Krisalis	£22
Orion	Minerva	£8
Orrey	SpaceTech	£93
Ovation	RISC	£84
Overload	Clares	£13

Padlock

- site licence	ICS	£10
Pandora's Box	Fourth Dim	£18
Pappus	Computer Tutorial	£17
Paradroid 2000	Coin-Age	£20
Payroll Manager	Silicon	£79
PC Emulator 1.8	Acorn	£95
PDT	Oak	£149
Pendown	Longman	£46
Pendown Etoiles	Longman	£46
Pendown Outline Fonts	Longman	£19
Pendown Plus	Longman	£68
Personal Accounts	Apricote	£29
Perspectives	TechSoft	£54
Pesky Muskrats	Coin-Age	£19
Phonic Games	Fisher-Marriott	£28
Photopia	CIS	£POA
Picture Book	Triple R	£15
Picture It!	Applian	£29
- Topic discs	each	£9
PinPoint	Longman	£65
- site licence		£386
PipeDream 3	Colton	£72
PipeDream 4	Colton	£119
PipeDriver Dot 1	ICS	£10
Pipe Mania	Empire	£18
Pirate, age 8-14	Chalksoft	£19
Placard	ICS	£10
- site licence		£30
Plague Planet	Alpine	£13
PlayBack	RISC	£18
Play It Again Sam 1	Superior	£20
Plot	Clares	£POA
Podd, KS1,2	ESM	£25
Podd - Welsh, KS1,2	ESM	£38
Polyominoes	Topologika	£26
Populous	Krisalis	£22
Poster	4maton	£75
PowerROUTER	Silicon	£159
Prehistoric Animals, sprites	Micro Studio	£16
Premier	Circle	£71
- DataBase	Circle	£25
- WordProc	Circle	£25
Presenter GTI	Linguinity	£66
PrimeArt, KS1-4	Minerva	£68
PrimeMover, KS2-4	Minerva	£75
PrimeSolver, KS1-4	Minerva	£POA
PrimeWord, KS2-4	Minerva	£51
Printer Drivers, RISC OS:		
Canon BubbleJet, Canon LBP,		
Canon P1080, ColourCel, Epson JX,		
Epson ESC-P2, HP, Integrex 132		
- each	Ace	£19
Deskjet 500C, Epson / Star colour		
- each	RISC	£15
ProDrivers: Canon LBP8, Epson ESC-P2,		
HP Colourjet	Ace	£37
TurboDrivers: Canon, Epson Stylus 800,		
HP	CC	£42
ProArtisan 2	Clares	£109

ProCAD, KS4	Minerva	£394
Programming in ANSI Standard C		
on the Archimedes	Sigma	£15
Prophet (requires 2 Mb)	Apricote	£145
Prophet Entry Level	Apricote	£10
ProSHEET	Silicon	£36
Protext	Amor	£117
Provocator	Computer Tutorial	£15
Puncman 1 and 2	Chalksoft	£16
Puncman 3 and 4	Chalksoft	£16
Puncman 5 to 7	Chalksoft	£18
Punctuate	Xavier	£31
Punctuate!	Topologika	£25

QDBug	Leading Edge	£58
Quest for Gold	Krisalis	£19
QuickKey	ICS	£10
- site licence		£30

Real McCoy 2	Fourth Dim	£23
Real McCoy 3	Fourth Dim	£23
Real McCoy 4	Fourth Dim	£27
Recall, age 8-13	Sherston	£37
Redshift	Minerva	£10
RemoteFS	Atomwide	£45
Render Bender 2	Clares	£77
Repton 3	Superior	£19
Resultz	Colton	£109
Revelation 1	Longman	£39
Revelation 2	Longman	£75
Revelation 2 CD Rom	Longman	£98
Revelation ImagePro	Longman	£127
Reversals	Chalksoft	£17
Rhapsody 2	Clares	£44
Rhapsody 3	Clares	£79
Rhythm-Box	Clares	£38
RhythmBox II, age 8+	EMR	£34
RiscBASIC Compiler	Silicon	£77
RiscForth Compiler	Silicon	£72
RISC OS 3 First Steps	Dabs	£POA
RISC OS 3 Programmer's		
Reference Manual	Acorn	£99
RISC OS Companion Vol 1	Oak	£49
RISC OS Style Guide	Acorn	£13
RoboLogo	Silicon	£38
Round the World Yacht Race, age 9+	Storm	£25

Saloon Cars Deluxe

Fourth Dim	£25
- Deluxe Extra Courses	Fourth Dim £14

S-Base Developer

S-Base Developer Plus	Longman	£255
S-Base Network	Longman	£275

S-Base Personal

Schema	Clares	£95
Schema 2	Clares	£POA
Science, drawfiles	Micro Studio	£25
Score Draw	Clares	£44
Scorewriter PMS Desktop, age 12+	EMR	£147
ScreenPlay	Whitgit	£35
ScreenTurtle version 2	Topologika	£27
Search and Rescue, age 9+	Storm	£26
Seashore Guide, drawfiles	Micro Studio	£16
Seelinks - Ourselves, KS1,2	ESM	£27
Seelinks - Pond Watch, KS2	ESM	£35
Seelinks - Tourism, KS3	ESM	£55
Seelinks - Transport, KS2	ESM	£35
Serenade	Clares	£106
Serpents	CIS	£POA
Settlement, KS3	ESM	£31
ShapeFX	Data Store	£10
ShareHolder	Silicon	£96
ShareHolder Professional	Silicon	£164
ShowPage	CC	£143
Shylock Gnomes, age 10-15	Selective	£16
Sim City	Krisalis	£22
SkyHunter	Longman	£22
Sluth	RISC	£42
smArt	4maton	£50

smArt Aliens, Animals, Dinosaurs, Egypt,		
Europe*, Faces*, Fantasy, Fashion,		
Fiddles & Drums, Heraldry, Homes*,		
Leisure*, Look Smart, Smartoons,		
Trees and Gardens		
*Please specify English, French, German,		
Spanish or Welsh - each	4maton	£15
smArtFiler	4maton	£32
smArt Modern Languages	4maton	£19
Smudge the Spaniel, age 4-8	Storm	£20
Snippet (new version)	4maton	£32
Soapbox	Xavier	£34
SolidCAD	Silicon	£77
SolidsRender	Silicon	£77
SolidTools	Silicon	£204
- education price		£194
SongBook, age 3-10	EMR	£24
Sound Engineer, age 12+	EMR	£59
Sound-FX Maker	CIS	£POA
Sound-FX Maker & Photopia	CIS	£POA
Sounds & Rhymes	Xavier	£29
Spark	David Pilling	£5
SparkFS	David Pilling	£20
Sparkle	Moriey	£59

Special	ICS	£10
- site licence		£30
Speech!	Superior	£18
Spelling week-by-week	Chalksoft	£20
Spex	ExpLAN	£98
Spheres of Chaos	Matt Black	£19
Splash, age 7-11	Sherston	£19
Splice	Ace	£34
Split an Image, age 7-16	Sherston	£16
Spoken Word	Wyddfa	£16
Spooler	Computer Tutorial	£9
Sporting Triangles	CDS	£19
SportsDay	Selective	£20
SportsPeople	Selective	£20
SpriteEd	Computer Tutorial	£17
SpySnatcher	Topologika	£12
Square Route	Computer Eyes	£16
Squirrel	Digital Services	£120
Starspell Plus	Fisher-Marriott	£19
StartWrite	Icon	£55
StockPack	Topologika	£37
StoryBook, age 3-10	EMR	£59
StrongED	Stallion	£22
Studio24Plus Version 2, age 11+	EMR	£149
Studio24Plus Version 3, age 12+	EMR	£210
Stunt Racer	Fourth	£25
SUMthing	Resource	£19
SuperDump	Silicon	£20
Superior Golf	Superior	£14
SuperPlot	Silicon	£20
Swiv	Krisalis	£19

TABS	ExpLAN	£95
Talisman	Minerva	£8
Talking Pendown	Longman	£54
Talking Pictures	Wyddfa	£16
Target Maths	Triple R	£15
Technodream (Nevryon 2)	Superior	£19
TechWriter	Icon	£159
Thinklink	Xavier	£29
ThinkSheet	Fisher-Marriott	£38
Thundermonk	Minerva	£11
Titles	Brain Games	£16
Timeshare	Fisher-Marriott	£19
Timetabler	Minerva	£549
Time Traveller, KS2	ESM	£37
- Britain Since the 1930s, KS2		£30
- Expansion, Trade and Industry, KS3		£36
- Making of the United Kingdom, KS3		£36
- Medieval Realms, KS3		£36
- The Victorians, KS2		£30

TinyDraw/TinyPuzzle	Topologika	£34
TinyPuzzle	Topologika	£24
Titler	Clares	£115
ToolKit Plus	Clares	£36
Tools Graphics, drawfiles	Micro Studio	£23
Topographer	Clares	£61
Touch Type	Iota	£38
Tower of Babel	Cygnus	£17
Trace	David Pilling	£5
Tracer	Midnight	£46
Tracker	Leading Edge	£37
Transport, drawfiles	Micro Studio	£25
Turbo Type	CIS	£POA
Turbo Type, Sound-FX Maker,		
E-Numix	CIS	£POA
Tween	Ace	£35
Twin World	UBI Soft	£14
TWO (Task and Window Organiser)	ICS	£10
- site licence		£30
TypeStudio	RISC	£38

Utility Disc 1	Data Store	£8
Utility Disc 2	Data Store	£13
Utility Disc 3	Data Store	£7
Utility Collection	Data Store	£21
Vector	4maton	£75
View-Mac 3	Human	£65
- Arc/Mac Cable	Human	£24
Viewpoints, age 7-11	Sherston	£37
Virtual Golf	Fourth Dim	£25
Visual Backup	Dabhand	£39
Vox Box	Clares	£44

Waiter	Digital Services	£35
Waterloo (not OS 3.1)	Turcan	£19
Whale Facts	Topologika	£31
Wordbank	Topologika	£25
Words and Pictures	Chalksoft	£18
WordWorks	CC	£38
Wordz	Colton	£85
World Geography Maps, drawMicro Studio		£23
WorldMaker, KS3,4	ESM	£51
World Map Study, KS3,4	ESM	£61
Worldscape	Leading Edge	£17
World Wildlife, sprites	Micro Studio	£16
Worra Battle	Oak	£15
WorraCAD	Oak	£79

Yacht 2

Computer Tutorial	£49
Computer Tutorial	£94

Zarch

Superior	£14
Micro Power	£15
Grenlin	£19



HARDWARE

I2C PRODUCTS...

AnDi Oddule	Baldon	£39
I2C Adaptor (needed unless you already have an I2C socket)	Baldon	£10
I2C SWI (enhanced IIC_Control)	Baldon	£15
- bought with Oddule		£5

SCANNERS, DIGITISERS...

ArcScanner including Epson GT-4000		
Colour Converter	Clares	£1660
FaxScan	Lindis	£145
GreyHawk	Spaceteck	£94
Handipad	Wild Vision	£98
Hawk V9 MkII	TechSoft	£193
- standard	Wild Vision	£199
- hardware dithered		£259
HVision Digitiser Colour	HCCS	
- A3000 External		£137
- A3000 Series / A4000 Internal		£124
- A5000 / 300 / 400		£124
iMage (Sharp JX-100)	Irlam	
- for A5000		£490
- for other computers		£589
Image Scanner	Iota	£383
- Colour Upgrade Kit	Iota	£239
- Fast Parallel Card	Iota	£98
i-Scan 200	Irlam	£539
i-Scan 400	Irlam	£589
Pineapple Colour Video Digitiser		
- A3000 boxed	Pineapple	£195
- A3000 Series / A4000 Internal	Pineapple	£230
Prolmage (Epson GT6000)	Irlam	
- for A5000		£989
- for other computers		£1089
Scan-Light A4	CC	£277
Scan-Light 256	CC	£185
- A3000 External	CC	£190
- A3000 internal	CC	£190
Scan-Light Professional	CC	£565
- as above + SCSI interface	CC	£699
Scan-Light Video	CC	£208
SnapShot Colour Video Digitiser		
- A3000 version	Linguinity	£195
- A3000 Series / A4000 Internal	Linguinity	£275
Spectra	RISC	
- A3000 Series / A4000 Internal		£545
- A3000 External		£555
- Archimedes / A5000		£545
Vision Digitiser	HCCS	
- A5000 / 300 / 400 Mono		£48
- A5000 / 300 / 400 Colour		£76
- A3000 External Mono		£60
- A3000 External Colour		£89
- A3000 Series / A4000 Internal Mono		£48
- A3000 Series / A4000 Internal Colour		£76

Utility Disc 1	Data Store	£8
Utility Disc 2	Data Store	£13
Utility Disc 3	Data Store	£7
Utility Collection	Data Store	£21
Vector	4maton	£75
View-Mac 3	Human	£65
- Arc/Mac Cable	Human	£24
Viewpoints, age 7-11	Sherston	£37
Virtual Golf	Fourth Dim	£25
Visual Backup	Dabhand	£39
Vox Box	Clares	£44

MEMORY...

<i>Fitting extra unless otherwise stated</i>		
† <i>Fitting fairly easy</i> ‡ <i>Fitting needs expertise</i>		
A3000 2 Mb Upgradable	† Atomwide/IFEL	£43
A3000 4 Mb †	Atomwide/IFEL	£100
A3010 1-2 Mb		£39
A3020 / A4000 2-4 Mb †	IFEL	£POA
A310 2 Mb Upgradable soldered †	IFEL	£88
— as above + MEMC1a		£113
— as above + MEMC1a + fitting		£143
A310 4 Mb soldered + MEMC1a †	IFEL	£152
— as above + fitting		£182
A5000 2-4 Mb †	Atomwide	£85
A5000 2-8 Mb including fitting	Atomwide	£500
A5000 4-8 Mb including fitting	Atomwide	£391
A540 4 Mb †	Atom	£238

ICS

051-625 1006

Bubble Jet BJ-300	Canon	£325
Bubble Jet BJ-330	Canon	£380
Bubble Jet BJC-800 + TurboDriver	Canon/CC	£1374
DeskJet 510	Hewlett-Packard	£275
DeskJet 500C	Hewlett-Packard	£375
DeskJet 550C	Hewlett-Packard	£525
Laser Direct HiRes4	CC	£899
- 250-sheet Paper Cassette		£99
Laser Direct HiRes8	CC	£1275
Laser Direct HiRes Board	CC	£325
New toner cartridge for Canon LBP-4		£59
New toner cartridge for Canon LBP-8		£75

COMPUTERS...

A3010 Action Pack	Acorn	£335
A3010 Learning Curve System	Acorn	£599
A3020 FD System	Acorn	£650
A3020 HD60 System	Acorn	£775
A4 2M FD System	Acorn	£1350
A4 4M HD60 System	Acorn	£1650
A4 Battery Pack	Acorn	£53
A4 Shoulder Bag	Acorn	£37
A5000 2M HD80 Multiscan System	Acorn	£1225
Pocket Book	Acorn	£210

MISCELLANEOUS...

386 PC Expansion Card 25 MHz	Aleph One	
- 1 Mb		£POA
- 4 Mb		£POA
486 PC Expansion Card	Aleph One	
- 1 Mb		£POA
- 4 Mb		£POA
4-slot 4-layer Backplane	IFEL	£52
5315 Monitor	Aydin	£425
A300/400 Fan kit	ICS	£15
A3000 Expansion Box	Wild Vision	£135
A310 RISC OS Carrier Board	IFEL	£18
A5000 Fitting Kit for second hard disc	ICS	£15
A5000 105 Mb Removable Disc Kit	£POA	
- Extra 105 Mb Disc		£POA
Arkey Function KeyStrip Holder	ICS	£3
- pack of 4		£10
ArcNET	ACS	£69
ARM3	Aleph One/IFEL	£165
Arm Stick	Arm Tech	£28
ColourBurst	State	£374
ColourCard	CC	£225
- A3000 External	CC	£225
Dongle Dangle with screw fittings	ICS	£6
Fan filters (pack of 10) (not A5000)	ICS	£6
FaxPack	CC	£289
Floating Point Accelerator		
(A5000 + A540)	Acorn	£93
Floppy Discs, 10 x 3 1/2" High Density		£10
G16 True Colour Card	State	£258
G8 Plus Accelerator	State	£238
HiPoint Mouse for A4	Genius	£49
Microlin fx Pocket Fax Modem	Pace	£179
Micro Mouse	Clares	£26
Monitor Stand for A3000	ICS	£21
Mono/SCSI	Atomwide	£48
Podule Case for A3000	HCCS	£16
Printer Port Sampler	Leading Edge	£42
Printer/SCSI	Atomwide	£74
Publishing Pack	CC	£475
Revolution CD-ROM	Morley	£295
Revolution Pro (for SCSI system)	Morley	£435
RISC OS 3 Upgrade	Acorn	£45
- A5000	Acorn	£25
Seal 'n Type spill-proof Keyboard Covers		
- Archimedes / A5000	Kador	£14
- A3000	Kador	£14
TouchWindow	Lindis	£234
Whisper Fan Quietener		
(for A300/A400 series only)	ICS	£15
Wizzo IDE Filing System on rom	ICS	
- Wizzo4 for A4		£POA
- Wizzo5 for A5000		£39

"You wonder how you ever managed without QuicKey."

NOW ONLY £10

"Congratulations on ColourSep! The results, compared with the drivers currently available, are bordering on the fantastic."

NOW ONLY £15



"TWO is the best thing I've ever bought."

NOW ONLY £10



Padlock is our top seller for simple disc security.

"Fantasy offers a wider range of effects than FontFX. It is a package for the perfectionist, whether professional or enthusiast."

NOW ONLY £15

"DrawBender is quite stunning."

NOW ONLY £10

As well as letting you type all those extra characters, Special is the easiest way to examine new fonts.

HOW TO ORDER

VAT: Zero-rated items are marked V0. UK customers please add 17.5% to all other prices. EC customers outside the UK (including BFPO) please do the same unless you are VAT registered, in which case quote your international VAT number. Ours is GB 955 7258 84.

CARRIAGE IS FREE WITHIN MAINLAND UK IF YOU PAY ON ORDERING.

Overseas carriage: If you are paying by credit card we will add airmail and insurance at cost. Otherwise please add £6 (Europe) or at least £12 (elsewhere) for each software item and send a pounds sterling bank draft payable at a London clearing bank, or Eurocheques for not more than £100 each.

Credit cards are welcome. We do not charge your account until your order is fulfilled. Your name and address must be as known to the credit card company. If you are leaving an order on our answering machine please include your telephone number, the expiry date of your card, and your calculation of the total payment due. We will make no charge for credit card commission unless we have informed you first.

Official orders are welcome from UK government and educational institutions. Payment is due in 14 days. Invoices are subject to carriage and late payment charges.

Site licences are available for most products. Please check our prices.

All products, prices and specifications are offered in good faith and are subject to change without notice. We process all orders immediately, but suppliers do sometimes keep us waiting. Goods are guaranteed but we do not supply them on approval. Returns and cancellations can only be accepted by prior agreement and there may be a charge to cover the costs involved.

AUTHORISED ACORN DEALER

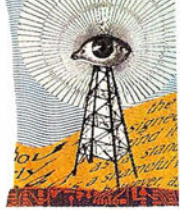
ICS (Ian Copestake Limited)

Dept B48, 1 Kington road, WIRRAL, Merseyside, L48 5ET

Tel: 051-625 1006

Fax: 051-625 1007





ACORN REVAMPS RANGE

THE fastest yet Archimedes has been unveiled in the form of a revised A5000, and Acorn has revamped its whole range of machine packs and prices.

The new software bundles and price cuts are to spearhead Acorn's autumn and Christmas campaign. The basic A3010 drops from £499 to £399 inc. VAT – the cheapest Risc machine yet – and comes supplied as standard with a new 'edutainment' bundle called the Action Pack. Revised Learning Curve and Home Office packs are also cheaper.

The Action Pack includes Zool plus five demos for *Lemmings*, *Chuck Rock*, *Superpool* and *Fervour*. Icon's *StartWrite* word processor is included too, along with an audio training tape.

The revised Learning Curve Pack is now based around the *Advance* integrated suite, the *PC Emulator* with DR Dos 6 and the tape. Additionally, eight demos of selected applications is supplied.

With the Home Office pack comes Icon's *EasiWriter* word processor, Iota's *DataPower*



Bringing the Office into your Home

Product details

	Base	L/Curve	Home
A3010 Action Pack (1Mb)	£399		
A3010 (2Mb, AKF30)		£749	
A4000 (2Mb, 80Mb HD, AKF30)	£999	£1049	£1099
A4000 (2Mb, 80Mb HD, AKF30)	£1049	£1099	£1149
A5000 (2Mb, 80Mb HD, AKF18)	£1499	£1549	£1599
A5000 (4Mb, 160Mb HD, AKF18)	£1699	£1749	£1799
All prices include VAT			
AKF30 = standard monitor, AKF18 = multiscan monitor.			

database, *Pipedream 4* from Colton and the *PC Emulator*. Demos of *Prophet* accounts package and the *Almanac* organiser are included.

The A5000 now has a 33MHz Arm3 processor,

which makes it about 20% faster than before. A matching 33MHz version of the FPA10 chip will follow. Upgrading the new A5000 to 8Mb has been made simpler by putting the Memc1a chip in a socket.

ACORN VIDEO

ACORN is planning its annual Christmas advertising campaign with a few twists. A full programme of press advertising is planned, including the national papers.

Instead of backing this up with TV ads, Acorn is opting for a free promotional video campaign. Acorn's philosophy is that if you're interested enough to contact them, in response to the campaign, a free video is a worthwhile spend.

The video's primary aim is to 'demystify' home computing. The Jackson family navigates through the hazards of choosing a computer with host John Leslie, of *Blue Peter*.

Acorn's Richard Percy commented: 'Understanding the customer is vital in deciding which marketing channel best reaches the audience.'

By addressing the customer on an individual basis in the home, our video concept is by far the most focused and personal approach.'



John Leslie, *Blue Peter* presenter, is now selling the benefits of Acorn



The new Learning Curve

THE ACORN USER COVER DISC

Thank you to all of you who have phoned and written to us with positive feedback about our new cover disc. The main reason behind this important move was reader demand, and we confidently expect our cover disc to improve the magazine over the next few months. We will be including more and more complete applications, and will be using the space left in the magazine by the departure of the yellow pages to provide you with more in-depth coverage of the Acorn scene. We always welcome letters and views on any aspects of the magazine, so do keep writing in.



The ideA range

ICS was the first company to offer IDE products for Acorns back in 1990; now they are the standard choice for new Acorn computers. Building on three years' experience we have continually improved our IDE filing

system. It now offers the highest level of RISC OS compliance, and compatibility with at least 45 different hard discs tested by us. Can any other supplier make this claim?

Our IDEFS abolishes the RISC OS limit of 512 Mb, and offers extra features such as password protection, background operation, disc partitioning, and power saving (which allows some discs to stop spinning when idle).

Partitions can have different levels of protection. Family or pupils can access some of your files while you keep others safely out of their reach. Or you can simply protect the whole disc (reformatting is not required for this).

Our hard disc upgrade kits are based around two internal interfaces at present: IDEA3IN for the A3000 Series, and IDEARCIN for the A300/A400/A500 Series. All kits are designed to a high standard and include all the parts you will need.

IDEA3IN upgrade kits include an I²C expansion socket as standard. They come with a 2½" disc already attached, and are easy to fit once you have opened up your computer. You may safely disbelieve rumours spread in the past (by sellers of SCSI hard discs) that internal upgrades might not be safe in an A3000. We have adhered carefully to the guidelines in Acorn's technical specifications, and in three years have never come across a problem.

IDEARCIN upgrade kits provide a fast 16-bit link all the way from the computer to the hard disc. They can even be fitted to an A310 without a backplane – quite a cost saving. A second hard disc can easily be added later if required.

Interfaces and hard discs can also be bought separately. By shopping around you may even save a few pounds. But beware: not all IDE hard discs work with all interfaces, and if you have a problem it may be difficult to decide who should put it right. We recommend buying a complete kit from one source.

WIZZO is the name given to our IDE filing system when it is supplied as a single rom chip. Wizzo5 is for the A5000, and Wizzo4 is for the A4. You should buy a Wizzo if you need password protection or wish to use larger hard discs. (Wizzo4 has been delayed slightly – we are adding a feature to ensure compatibility with possible future A4 upgrades).

A Wizzo rom by itself will only produce a slight speed improvement. If you need speed in an A5000, fit an IDEARCIN interface instead. Up to 60% improvement can then be achieved, but this does depend which hard disc you use so do check with us first.

How to read our ideA product references

A number at the end is the nominal hard disc capacity in megabytes. We usually round this down, so the actual formatted capacity may be higher. All discs have auto-parking. Average access times vary but all are below 20 ms.

All prices shown exclude VAT and are subject to change without notice. The cost to us for hard discs can vary enormously from week to week – not always downwards! Your local dealer can obtain ideA products from us or from a distributor.

Archimedes A300/A400/A500 Series Internal Upgrades

Package includes formatted hard disc, ideA interface card, hard disc cradle and fittings, fan kit, replacement multi-purpose LED (power and drive status), manual with fitting instructions. Can be fitted to an A310 without a backplane. If a backplane is used it must be a 4-layer type. Easily fitted by most users:

IDEARCIN 40	£175	IDEARCIN 330	£399
IDEARCIN 80	£205	IDEARCIN 420	£499
IDEARCIN 170	£275	IDEARCIN 540	£650
IDEARCIN 240	£325	IDEARCIN 1000	£925

A3000 Series Fully Internal Upgrades

Package includes formatted hard disc mounted on ideA interface card, manual with fitting instructions. Fully internal, using internal expansion slot. Co-exists with floppy drive and memory upgrades. Fits the new 1992 computers. Easily fitted subject to Acorn warranty stipulations.

IDEA3IN 40	£175
IDEA3IN 80	£250
IDEA3IN 120	£299

A3000 FAN KIT (not usually required*) £19

*Only required if the computer has been fully upgraded, e.g. with maximum memory AND Econet AND an external podule.

Separates for hard disc upgrades

We can only guarantee the performance of ideA interface cards with hard discs we have tested ourselves, so please check if in doubt. If you are buying a hard disc for an A5000 please say so. If you intend to fit the disc in addition to an existing one we need to know the make and model of the existing disc. Acorn's interface does not support all makes of disc, and some models will work as a second disc but not on their own.

Hard discs on their own are listed as, for example, IDEA 80. An S at the end indicates a 2½" disc.

IDEARCIN (Archimedes Interface for Internal disc(s))	£60		
IDEA3IN (A3000 Interface for Internal disc)	£75		
ARCHIMEDES INTERNAL CRADLE KIT	£15		
ARCHIMEDES A300 / A400 SERIES FAN KIT	£15		
4-SLOT 4-LAYER BACKPLANE	£52		
POWER CABLE FOR SECOND HARD DISC	£5		
A5000 SECOND HARD DISC FITTING KIT	£15		
IDEA40	£125	IDEA330	£349
IDEA80	£155	IDEA420	£449
IDEA170	£225	IDEA540	£600
IDEA240	£275	IDEA1000	£875
IDEA40S	£115		
IDEA80S	£190		
IDEA120S	£239		

WIZZO IDE Filing System on rom

Package includes rom, manual and fitting instructions. Compatible with RISC OS 3.0 and 3.1. Allows up to four logical partitions over two physical drives. Each partition appears separately on the icon bar and can have different password protection. Makes use of existing Acorn hardware for maximum compatibility, but works with a wider range of hard discs. Security breaches using ADFS can be prevented. Can be fitted easily by a competent user.

Available now: WIZZO5 for A5000 £39
Available soon: WIZZO4 for A4 POA

Quantity discounts available • Dealer enquiries welcome

HIGH QUALITY COLOUR

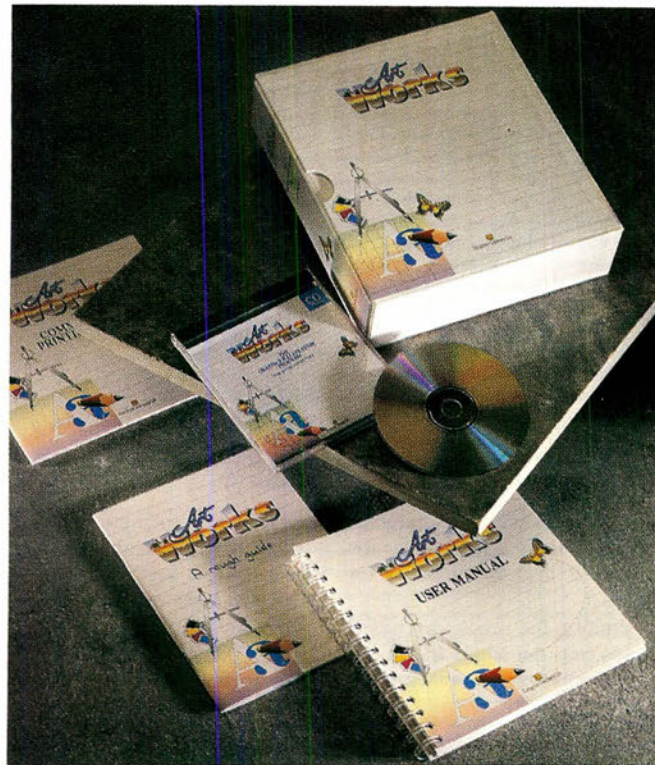
COMPUTER Concepts has announced TurboDriver support for the new Canon BJC600 colour ink-jet printer. The BJC600 is an A4 format development of the larger and much more expensive BJC800 printer, which can accept paper sizes up to A3.

360dpi resolution, 40% more than 300dpi rivals, gives a visually superior print quality, according to CC. Four CMYK inks are used so blacks really are black and the printer is capable of very good grey scales.

The new Canon also boasts faster drying inks than any of its rivals plus lower running costs than other colour ink-jets. CC is supplying the BJC600 with TurboDrivers and a special parallel cable, which should retail at under £500 excluding VAT.

● Last month we brought first details of CC's new range of products to be launched at Acorn World. Prices hadn't been completely settled then, so here's the missing information: the Artworks CD will cost £169 + VAT.

Any



Artworks: now on CD-Rom

registered users can upgrade for £29 + VAT.

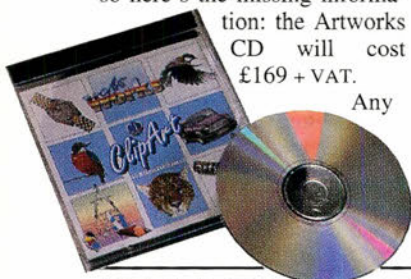
The CD version is 1.5 and the floppy disc upgrade cost £10 + VAT. Version 1.5 supports 24 bits-per-pixel sprites and has an industry standard Tiff file filter as well as colour separation option.

WordWorks costs £39 + VAT. WordWorks features

hyper-text help and a familiar on-screen look to help people more accustomed to the printed equivalent.

CC's new AudioPhile sound editor is £49 + VAT. Impression Publisher costs £169 + VAT and the OPI supplement is priced £230 + VAT.

Computer Concepts is on (0442) 63933.



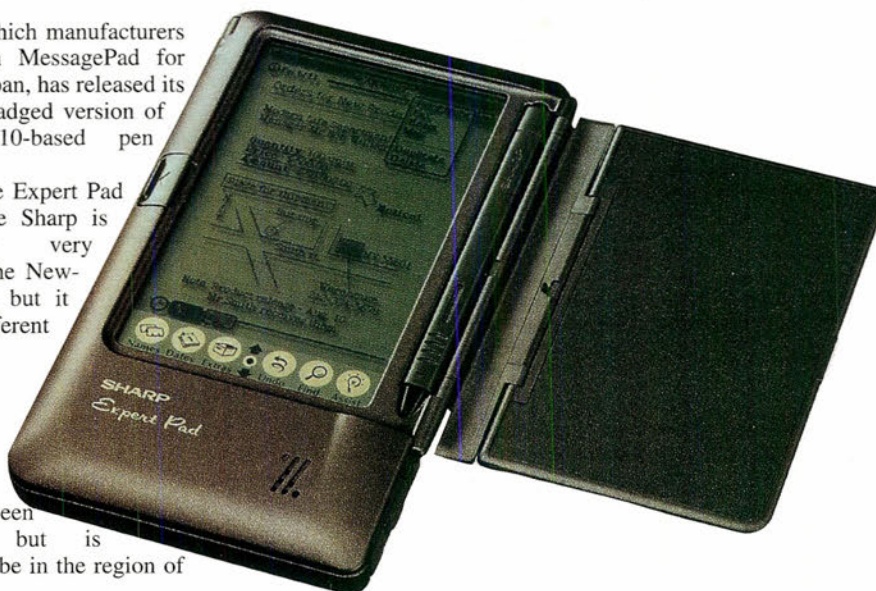
SHARP PDA USES ARM610

SHARP, which manufactures the Newton MessagePad for Apple in Japan, has released its very own badged version of the Arm610-based pen computer.

Called the Expert Pad PI-7000, the Sharp is functionally very similar to the Newton version but it has a different slimline wallet-style case.

At press-time the price had not been confirmed but is expected to be in the region of £600.

Sharp is on 061-205 2333.



Sharp's very own, Arm-packed Expert Pad

SQUIRREL HEADS NEW TRIO

THREE new products have been unveiled by Digital Services, including a revised version of the popular Squirrel database, plus a new ethernet card and a security application called Armlock.

Squirrel 2 has a total of 38 different enhancements including data compression to expand database capacity when storage space is tight, the ability to store Draw and sprite images as well as text on the backdrop, spreadsheet format editing, subset updating, and more besides.

A new module also has been developed in order to enhance graphing abilities. Upgrades are available to existing users in two forms; with a revised manual for £35 or £25 without. Squirrel 2 is priced £139 for a single-user version.

Digital Service's new Ethernet card is designed for the A3000, A4000 and A3020 and has been designed with the company's Netgain network data transfer accelerator system in mind, and this is supplied in Rom on the card itself.

Another feature of the card is that it can effectively password protect the CMOS Ram of the computer it is attached to. The card comes at a cost of £139 + VAT.

Armlock is a stand-alone password security system which also protects the CMOS Ram. Armlock is designed to restrict access selected files and directories to the system supervisor.

When protecting a hard disc there is no need to partition the device, a drawback of alternative security systems, according to Digital Services. A number of permission options are available.

You can also use Armlock to back up protected files and directories using a compression routine. Armlock is priced at £35 for a single user and £135 for a ten-user licence pack.

Digital Services is on (0705) 210600.

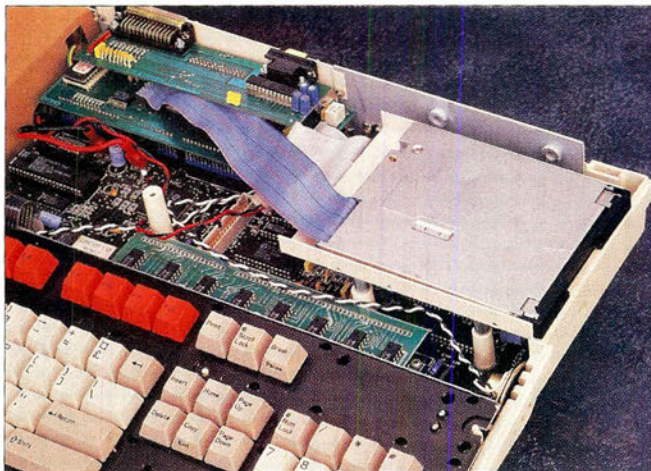
A3000 INTO A3020

GREYHOUND Marketing has announced details of three upgrades for the A3000 which will bring the machine's specification up to that of the A3010 and A3020.

The three units are the Multi I/O Primary board with high density 1.6Mb floppy drive, the Multi I/O Primary board with IDE 85/120 Mb hard disc, and the Secondary board with bi-directional parallel port and second RS232 serial port.

The first unit is potentially the most popular, as it contains a high density 1.6Mb drive, as found in the latest Acorn models. This replaces the existing drive in the A3000, and requires Risc OS 3.10 to work. It costs £199 + VAT.

The second board, the hard drive, can be fitted at any time below the high density drive,



Greyhound's boards bring the A3000 up to scratch

and comes with an external power supply. The price for the hard disc is available on request.

Finally, the secondary board plugs into the Multi I/O board

and provides total port compatibility with the new machines. Cost is £45 + VAT.

The products are being marketed by *Leading Edge*, which is on (0532) 374000.

EXTRA KEYS

CASTLE Technology of Suffolk is to announce a range of replacement keyboards for Acorn computers.

Castle's alternative keyboards will have standard PC layout, not Acorn, which should appeal to users of both technologies.

Meanwhile, *Liquid Silicon* is offering a pair of full-size external keyboard options for Acorn A4 portable users. These are *Chicony*-brand PC keyboards with a converted cable for Acorn compatibility. The membrane version costs £35.95 while a tactile 'clicky' version is priced £40.95.

Castle Technology is on (0728) 621222; Contact *Liquid Silicon* on (0592) 260512 for 64-page product catalogue.

PRINTER NEWS

FUJITSU, *Star* and *Panasonic* have all announced new printers this month.

Fujitsu has produced a 1.2kg portable thermal transfer printer called the *Joyriter*. Laser-quality output at 360dpi is claimed for the *Joyriter*, which measures just 12 x 1 x 8.5 inches. The recommended price is £319 + VAT. Meanwhile, *Panasonic* continues to remain faithful to the 24-pin impact dot-matrix printer and has introduced the latest in its *QuietPrinter* series, the *KX-P2023*. Supplied with a free sheet feeder until January, the *KX-P2023* has a suggested price of £240 + VAT. The new



Panasonic KX-P2023

Star SJ-144 is a thermal transfer colour printer which can operate at up to three pages per minute. *Star* claims the *SJ-144* is a better quality alternative to ink-jets. The *SJ-144* is priced £569 + VAT.

Star Micronics is on (0494) 471111, *Fujitsu*: 081-573 4444, *Panasonic*: (0344) 853915.



Star SJ-144

BUDGET CD-ROMS

BOTH *Cumana* and *Morley Electronics* have thrown down the gauntlet in the CD-Rom drive market with new low-price entry-level offerings. *Morley's* *Revolution* drive uses a single speed Sony mechanism and interface, all for £299 + VAT. *Cumana* has opted for a double speed *Panasonic* mechanism and users of the *Cumana EMU*

interface system need only buy the drive to get started for £299 including VAT. If you don't have an *EMU*, the *Cumana* drive and interface is £399 including VAT. Neither drive has a *SCSI* interface option. Both products will be reviewed in a future issue. *Cumana* is on (0483) 503121; *Morley Electronics* is on 091-257 6355.



Lowering the entry fee to the CD-Rom marketplace

EASY LIFE

RISC Developments has announced a Risc OS desktop-based C language development system called *Easy C* for £49 + VAT. The compiler conforms to the latest *Ansi* standard and has an integrated *Arm-code* assembler.

Other new products are a high density floppy interface (so 1.6Mb HD discs can be

used on older machines), a tape streamer based on the parallel port, a range of outline fonts supplied on discs containing ten families each at £11.95, and a new *Basic Programmer's Toolkit*.

There is an updated version of the *Wimp Programmer's Toolkit*. *Risc Developments* is on (0727) 840303.

Graphics processing with Wild Vision and Longman Logotron

Save over £60 with our special combined offer of greyscale digitiser, scanner and state of the art paint and image processing



**PACKAGE PRICE
ONLY £299.00 VAT
(INCLUDES &)**



Longman Logotron
124 Cambridge Science Park
Milton Road
Cambridge CB4 4ZS
Tel: 0223 425558
Fax: 0223 425349



Wild Vision
15 Witney Way, Boldon Business Park,
Boldon Colliery,
Tyne & Wear NE35 9PE
Tel: 091 519 1455
Fax: 091 519 1929

Wild Vision together with Longman Logotron have combined their latest technology to make you an offer that will excite the most discerning artist. Put your artistic dreams into reality with the latest development in scanning and image processing.

ScanLight Video 256 is a combined greyscale video digitiser and scanner for the Archimedes. It is the ideal tool for capturing images from real-life scenes to incorporate into computer graphics work. Using only one expansion slot, it allows connection to either a 400dpi handheld scanner (supplied) or to video from any composite source - such as VCR camcorder or still video camera. A viewfinder application enables a live moving image to be seen on the screen so that you can choose precisely the moment from your video film which you want to capture. Included in the package is all the necessary hardware and software to obtain images originating from 2-D as well as 3-D sources. Yet the entire process is conducted from just one single-width expansion card to save you expansion space as well as pennies.

When combined with the professional quality image processing power of Revelation imagePro, your results will be stunning. Revelation imagePro is a paint and image processing package with a powerful range of functions. It's surprisingly easy to use allowing you to concentrate on creativity. You can combine a number of deceptively simple procedures to create professional quality effects, integrating imported images with drawn elements, patterns and text. The resulting images can be appreciated in their own right, or imported into other applications such as DTP and Multimedia packages.

Revelation image Pro

- Create sprites in 2, 4, 16 Or 256 colour modes (including new standard palette high-resolution modes now supported by third party graphics cards).
- Tools include user defined brushes, sprays, bristle and other painting effects.
- Over 100,000 dithered colours under RISC OS 3.
- Fully editable graduated blends giving antialiased effects, directional graduations and image superimposition.
- Variable sensitivity tracing, blurring, sharpening, dithering and mosaic effects.
- Control over hue, saturation and contrast on whole images, selected colours or selected areas.
- Internal colour processing at 24 bits per pixel (dithered onto standard 8 bit sprite).
- Tint, RGB and CMYK colour modes.

ScanLight Video 256 combined grey scale digitiser and scanner

- A video digitiser and scanner combined on a single-width Archimedes expansion card - uses only one slot!
- 400dpi handheld scanner included
- Grabbing the right video image is easy with the real-time desktop viewfinder; then crop, scale or rotate using ScanLight Plus image manipulation software
- ColourCard compatible - view images live and grabbed in their true 256 - grey palette, for incredible smoothness of shading and photo like clarity
- Choice of grab sizes, 768 x 288 (TV-shaped) or square (up to 512 x 512 resolution)

TESCO SCHOOL UPDATE

THIS year's Tesco Computers in Schools promotion, which featured Acorn computers, peripherals and software, has easily beaten the standard set last year when the scheme was first introduced.

Over 11,000 schools benefited from the scheme this year, a 73% jump on last year's total and £6.5 million worth of Acorn and third-party goods were claimed, compared to £3 million last year. This means a third of all schools in the UK managed to claim something from the scheme and Tesco described the response this year as 'phenomenal'.

Thousands of spare vouchers were sent to Tesco directly and these were donated to special needs causes. 2600 items were claimed from the special needs computing section. All but one region around the country managed to increase the num-



One of the 7000 Acorn machines claimed through the Tesco promotion

ber of computers successfully claimed compared to last year.

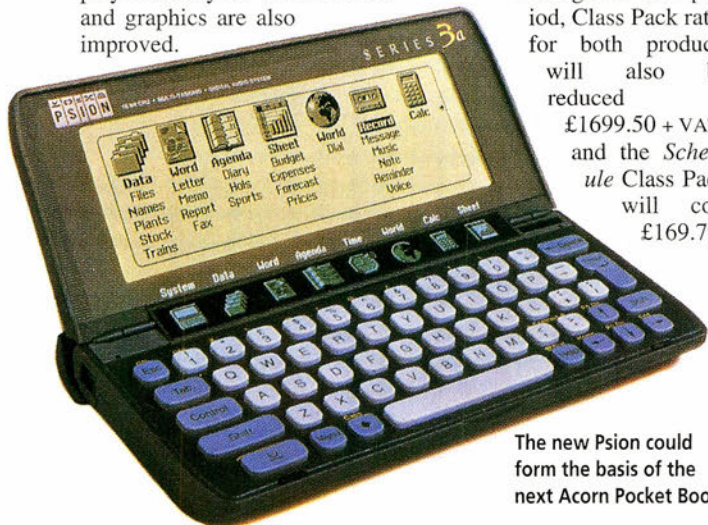
Essex alone boasted 609 computers in all, followed by Sussex (424) and Hertfordshire (390). Overall, 7000 Acorn computers, 17,900 software packages and 5300 peripherals

will be distributed to schools during September and October as a result of the Tesco scheme. Even schools aligned with Research Machines are taking on Acorn computers for the first time directly because of the scheme.

NEW PSION SERIES

THE Series 3a pocket computer has been launched by Psion adding to the original Series 3 range, rather than replacing it. It could form the basis of new versions of the Pocket Book.

New features include a processor twice as fast as before, a quadrupled screen resolution to 480 x 160 dots and maximum internal memory doubled to 512K. An audio recording and playback facility for memo taking has been added too. The new screen means 80 column text on 17 lines can be displayed clearly for the first time and graphics are also improved.



The new Psion could form the basis of the next Acorn Pocket Book

The Series 3a with 256K Ram is £269.95 inc. VAT and the 512K model is £329.95 inc. VAT. Acorn says that no decision to adopt the Series 3a as a new Pocket Book have been taken yet.

Meanwhile, the Acorn Pocket Book has been reduced from £212.72 to £169.95 + VAT for the rest of this year. *Schedule*, which provides a combined diary, personal organiser and timetable will remain at the introductory price of £16.98 + VAT.

Throughout the period, Class Pack rates for both products will also be reduced at £169.50 + VAT. and the *Schedule* Class Pack will cost £169.79.

TWAIN MEETS

SPOTTING a bargain scanner in the pages of a PC magazine and despairing that it can't be used with Archimedes programs could become a thing of the past.

Risc OS applications will soon have a system of acquiring image data from a diverse range of sources using special drivers. This means it should become simpler to match digitisers, scanners and other peripherals to Risc OS applications which source images.

Software author David Pilling is developing an Acorn version of the Twain system used on other platforms like the PC, Mac and Unix. David decided to develop a Twain-based image source manager when he realised how limited the range of Acorn-based flat-bed scanners is. Although there are plenty of SCSI-compatible scanners to choose from, most applications only support a limited number.

The Twain image source manager would behave rather like the printer manager in Risc OS.

In brief

4MATION LINKS INTO GERMANY

Software company, 4mation has announced a new link up with a German publisher.

Schneider & Scholz of Illertissen will adapt *Vector*, *Hatchback* and *Chameleon* for the German market and *Poster*, *Snippet*, *Chatter* and *Noot* are next on the list.

4Mation's Neil Souch commented: 'The popularity of Acorn computers in Germany, particularly amongst professional users, continues to increase.

'The expansion into Germany has certainly been helped by the release of a German operating system'.

VIRTUALITY AND ILLUSIONS MERGE

The two disc fanzines, *Virtuality* and *Illusions* have merged into one larger magazine. The *Illusions* title has been retained. Issue 12 contains programming tips, reviews and *Impression* and *Artworks* tutorials. Games and education are also covered and an *Impression II* tutorial disc has also been released. The 10 part tutorial costs £9.95 and 10% of the profits go to charity.

For details write to John Reed, 42 Wimborne Gardens, Ealing, London, W13 8BZ.

FOCUS IT

A new Acorn third-party company, Focus IT, has been formed by David Atkins, formerly of Oak Solutions. Focus IT's first products will be under the Ecole brand name and include SCSI devices, hard drives, MO drives and CD Rom drives. Another new product is called *Black Box*, a low cost sound sampler.

It aims to provide software compatibility with most other sound applications and is priced £29.95 + VAT. For more details, contact Focus IT on (0274) 618774.

SPECIAL OFFER
£249.95 inc VAT.

Advance with the Acorn Pocket Book



Extend the range and capability of your Archimedes computer without stretching your pocket. Save more than £200 on this special offer which includes:

- Acorn Pocket Book – use it anywhere, anytime
 - Acorn Schedule – a diary, personal organiser and timetable for the Pocket Book
 - Acorn A-link and Mains Adaptor – transfers files between Pocket Book and Archimedes systems
 - Acorn Advance – integrated productivity suite for the Archimedes system
 - One year hot-line technical support for Pocket Book
- Recommended retail price for all items £468.80 inc VAT

Advance and the A-Link require RISC OS 3 (Version 3.10 or later)



Please send the Advance with Pocket Book Offer

PBAU11/93

- ☐ I enclose a cheque/PO (made payable to Acorn Direct) for a total of £249.95
☐ Please debit my ACCESS/VISA card

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Expiry date of credit card: □ □ □ □

Signature.....

Name.....

Address.....

Postcode.....

Return this form to: Acorn Direct
(Advance with Pocket Book Offer)
FREEPOST Wellingborough
Northants NN8 2BR

Acorn

Offer valid for orders received between October 1st and 31st December 1993.
Please allow 28 days for delivery.

Sleuth

OPTICAL CHARACTER RECOGNITION

Sleuth is an Optical Character Recognition (OCR) package which converts human readable images of text into machine readable form.

Sleuth processes a scanned image of printed material and converts it into an ASCII file which may be further processed using a text editor or word processor. It is ideal for converting magazine articles, newspaper cuttings, legal documents, program listings, other resource materials etc. etc.

Sleuth version 1.0 is a low-cost entry package into OCR and produces excellent results on a range of typefaces. It is the first in a planned family of products which will take OCR on Acorn machines to full professional level. Any future OCR products will be available as upgrades to existing users.

- Fully RISC OS compliant and multitasking
- Sleuth recognises most PostScript fonts and other similar fonts (not bold or italic)
- With good quality 400 dpi images, Sleuth can achieve over 97% accuracy
- Converts text at speeds of 80-250 wpm
- User definable 'zone' used to choose which rectangle on the image to convert
- Handles sizes 9-24pt (you will need a 400 dpi scanner for good results below 12pt)

To use Sleuth you will require a scanner with a minimum resolution of 200 dpi. For best results you will need a 300 or 400 dpi scanner.

● **Sleuth £49**



Masterfile

Masterfile version 3 is the latest development in this best selling family of database programs.

Masterfile is fast, easy-to-use and provides powerful data management facilities suitable for home, education and business use.

- | | |
|------------------------------|----------------------------|
| ● Fast, multi-field indexing | ● Calculation fields |
| ● Multiple subsets | ● Import text and pictures |
| ● Password protection | ● Export CSV, TSV, ASCII |
| ● Global calculations | ● Card designer |
| ● Multi-line fields | ● Report generator |
| ● Database restructure | ● Toolbox |



● **Masterfile £49**

Supplied with sample databases, user guide, and reference card.

Hard Disc Companion

Hard Disc Companion is the complete backup utility providing excellent security for your valuable data.

Hard Disc Companion provides a structured approach to the backing up of hard drives to floppy discs, and the recovery of files after disc failure or accidental file deletion. Both Full and Incremental backups are supported, and the files to be backed up or ignored may be specified using simple drag operations. The entire backup specification may be saved in a script file for use at a later date. An efficient compression system backs up data quickly and efficiently.

'...it is certainly the best hard disc backup utility that I have ever used.' ARCHIVE Apr 92



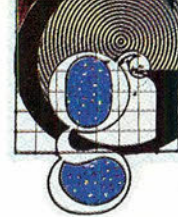
● **Hard Disc Companion £45**



RISC Developments Limited

117 Hatfield Road, St. Albans, Herts AL1 4JS Tel. (0727) 840303 Fax. (0727) 860263

Please add £1.70 carriage and VAT to prices. Please phone for site licence & educational prices.



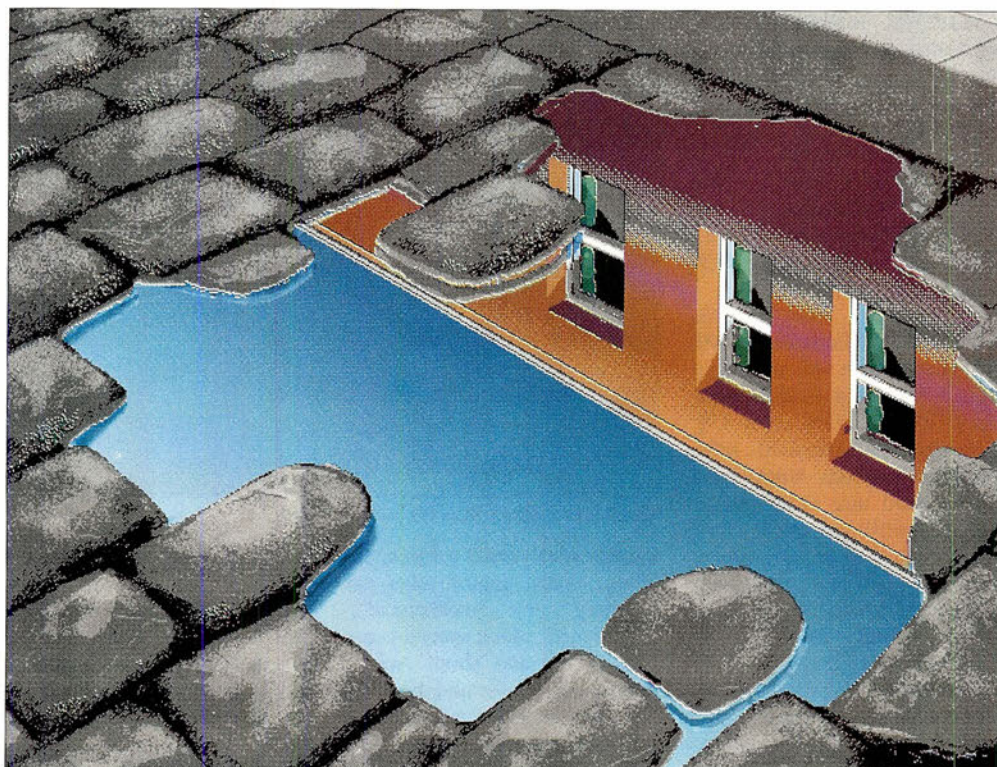
PRO ARTISAN 2 HITS THE STREETS

CLARES' long-awaited Art package, *ProArtisan 2*, has finally been unleashed. A long list of special effects, never before implemented in painting software on the Arc, have been included in this sophisticated yet easy-to-use program.

It is the first pixel-based art package to be fully compatible with State Machine or Computer Concepts graphics cards. Because its palette is stored with 24-bit colour values this means that although the program uses only 256 colours, it provides on-screen viewing of any colours from 16.7million available. Stunning true-greyscale images can be manipulated as never before.

All images are stored as high res sprites and retain all colour and bitmap information during any changes to smaller screen modes as is beneficial when printing, for faster throughput.

For the lowdown on this powerful new sprite editor turn to the full review on page 92.



ProArtisan: It's good. In fact, on reflection, it's very good

READER PICTURE

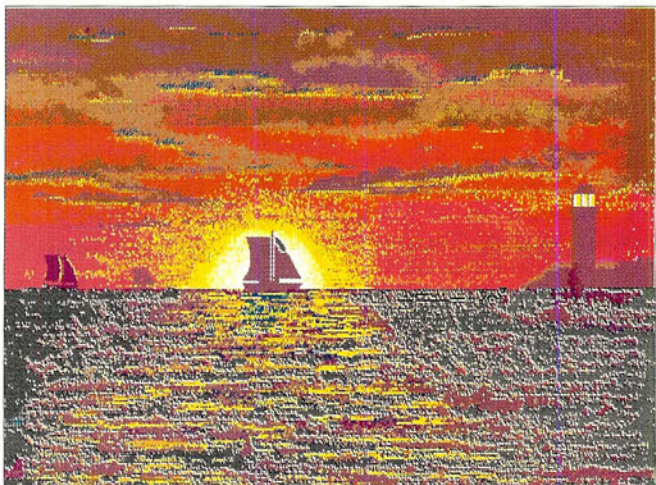
THIS month's successful Reader Picture entry was sent in by the Information Technology lecturer at Dartmoor Prison.

The work was submitted on behalf of one of the many inmates benefiting greatly from the use of Acorn equipment during IT classes there.

The warming seascape was

sent with other commendable pieces, which were all produced using *Paint* alone. It's quite refreshing to see some genuinely good-quality artwork created with the simplest painting package of them all.

Don't forget to send any details of how you produced your entries and keep them coming in.



Red (and grey) sails in the sunset

KINGFISHER

WINNER of the Computer Concepts' Battle-for-the-Bubblejet clip art competition, WJ Briggs of County Down, has expanded his professional illustration services to offer software companies his expertise and skills.

Having been a graphic designer, illustrator and air-brush artist for over twenty years, Mr Briggs has watched

with enthusiasm Acorn's progress in the area of vector graphics, to its present lead in the personal computer world with packages like *ArtWorks*. This has enabled Mr Briggs to now specialise in this medium utilising Acorn hardware.

Kingfisher Graphics (after the prize-winning bird, I guess) can be contacted on (0274) 888698.

NATIONAL DESIGN

A final year university design student, Anil Patel, has won a Welsh Development Agency's annual award in this year's Environment category.

The project, entitled *An Interactive Approach to Landscape Design* was designed, documented programmed and compiled entirely on the Arc platform, using an A420, Acorn's Desktop C Development package, *Impression II*, *Artworks* and an HP 500 colour inkjet.

The project's applications include a 3D landscape generator from 2D maps, aimed at investigating the design issues and techniques involved in anything from garden landscaping to opencast mining. In a world of PC-, Mac- and Sun-filled universities, an Arc comes out on top.

You can contact me by writing to Jack Kreindler, Graphics Page, Acorn User, 101 Bayham Street, London NW1 0AG.

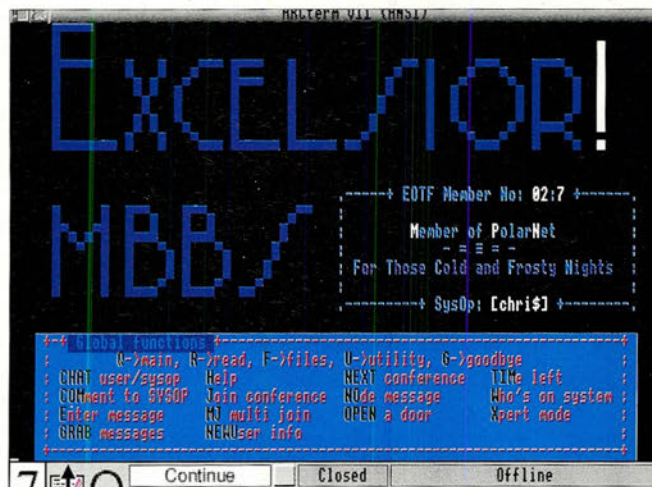
NORSES FOR COURSES

BULLETIN Boards catering for Acorn machines have been springing up all over the place recently, not just in the UK.

Excelsior! (M)BBS is a Norwegian BBS run by Chris Calvert on a PC system. The BBS can interact with you in English or Norwegian, or both. The Acorn section of the BBS is managed by Knut Folmo.

The system runs MBBS software on a Micronet 486DX PC with 16Mb of memory, with 210Mb and 119Mb hard discs. The modem is a US Robotics Dual Standard, providing for speeds from 300-14400 baud and HST mode. The Acorn file section contains a good selection of well over a hundred files and programs, some of which will be familiar to Acorn BBS users, others will be less well known.

Although many of the message conferences are conducted mainly in Norwegian, English users are welcome to contribute. The message areas



First it was football. Now it's bulletin boards

include such varied subjects as 'Cars, boats, motorcycles or anything else mechanical', Midi Music, and a special conference for and about Acorn computers, moderated by Tor Houghton, a name well-known to many Acorn users.

The BBS name derives from a poem by Henry Wadsworth

Longfellow, about an Alpine traveller who ignores good advice to wait for a storm to pass and falls victim to an avalanche. The moral here is to stay in and look around Excelsior on those cold and frosty nights.

Excelsior! (M)BBS is on [010] (47) 66 846379 8N1.

In brief

Tower of Power

THE Canzona is an unusual tower design modem from Sonix Communications. Covering all speeds from 300bps to 14400 bps with V42 and MNP error correction, and V42bis and MNP5 compression, the Canzona also supports Class I fax operation at 9600 and 14400bps.

The unusual small-footprint design and the complete package which includes all hardware, software (both data and fax) and cables add up to a premium price (these days) of £595 + VAT. A V32 Terbo version with flash memory is also available called the Volante at £795 + VAT. Sonix Communications is on (0285) 641651.

Terbo charge

US Robotics has announced, and is expected to begin offering, upgraded performance features to the Courier range of modems.

From October this year, latest models will also support Class II fax operation, and be able to connect to other makes of modem also using the interim high speed standard, the 19,200baud V32 Terbo as well as US Robotics own even-faster proprietary version of V32 Terbo.

An upgrade for existing (small footprint) Courier modems is expected to cost between £99 and £199, depending on when originally purchased. The upgrade board will enable further enhancement to V.Fast by plug-in chip which will be available next spring when the standard is ratified.

US Robotics products are also available on a sysop discount scheme from Hawkstale Ltd, in Staines, Middlesex on (0784) 449991.

YOU can contact me by writing to: David Dade, BBC Acorn User, 101 Bayham Street, London NW1 0AG or Email to: DavidD@arcade.demon.co.uk, or modem on Arcade BBS, User #2 - 081 654 2212 or 081 655 4412.

JAMES PONDER TOO

FURZEFIELD Hq is a new bulletin board run from Beaconsfield by James Ponder. The scrolling BBS is online 24 hours, and provides latest and current versions of the PD and commercial software from a group of young programmers calling themselves collectively DoggySoft. James, well known

to the Acorn BBS world as 'Jp', intends that Furzefield Hq BBS will also offer all the Acorn and Archimedes interest message echoes as well as a comprehensive file base. All speeds to V32bis 8N1 are supported.

Furzefield Hq is on (0494) 681711.

PALMTOP COMMS

THE new Psion Series 3a organiser and the release of the long-awaited Apple Newton MessagePad are making handheld comms a reality.

The Psion is a much-improved version of the Series 3/Acorn PocketBook in the same case but with a larger true 80 x 25 character screen. The machine comes with 256K or 515K of memory at £269 and £329 respectively. Psion is on (071) 262 5580.

The Newton lets you write messages, draw pictures and edit documents on its touch-sensitive screen. The serial port is its main communication link, and it comes with an optional FAX/data modem. Data can be transferred to and from PC or Mac via its serial port. Newton base version £510.64 + VAT (with FAX/data modem £638.51 + VAT) from The Serial Port on (0749) 670058.



The Furzefield BBS gives access to the latest DoggySoft software



Discover more at lower prices . . .

Complete and return the coupon below and we will send you full details of our range of CD-ROM special offers PLUS over £300 worth of vouchers redeemable against purchases of Cumana CD-ROM drives, software and related products.

... with
Cumana's
world of cd-romTM

NAME _____ JOB TITLE (if applicable) _____

ADDRESS _____

POSTCODE _____ DAYTIME PHONE NO. _____

HOME ☐ EDUCATION ☐ BUSINESS ☐

For official use: Reply No. _____ A/U

CUMANA LTD., Pines Trading Estate, Broad Street, Guildford,
Surrey GU3 3BH. Telephone: 0483 503121 Facsimile: 0483 451371

Prices
from
under £300
including VAT



**Manufacturers of
quality products
since 1979**

NOW 250 FONTS FOR ONLY £30

Supplied with Bold & Italic styles, comes on 20 discs

Font Pack 1

Acorn STENCIL SPLODGE TECH BALLOON Raven SCOP Cyberoid Hardcase YOUNG	MegaType Schwarz THEATRE Cooper Black Gangster Bit Buckingham Palatino Oxford Old English Reiner	Park Avenue Brush Script Friendly Chicken Classic Bolt Citric Orange Amber garden	Jotter Ladybird Milton Keynes Lazy Koch Swizz Trio Baskerville Itali Select	Jayne George Columbia ALGERIAN Dubiel SOLD Συμφωνία XMAS XRMM
--	---	--	--	---

Font Pack 2

POST CRYPT Цириллиц KWEI CAVEMAN DEUSEX Future LED Style Poncho Ricksaw New	TERMINATOR STRONGMAN Gordon ESPERES METRO LINER SNYDER Fox Script FLINTSTONE Rachadelle Sweet	Andromeda Architect Chaseline Chinese Charlie Canoith Heidelberg Chalia Murder Oregon	Informal El Garret Alison Square EDDA Black Caligula Jackson Laser Daytona	BUBBLE China Town BORZOI Kathlita Jumbaja Windsor Video Phaedrus Graphic
--	--	--	---	--

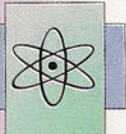
Font Pack 3

MULTICOLOR HIGH SCHOOL CLUMSY RED SQUARE ZALESKI GRUHAM SIMPSON Science Mushy Kick Off	DIAMOND King William JUNK FUNK Koshgarian Romeodin RACKHAM QUIZ SHOW KRAMER UPPER WEST	Good City Juliet annie Gibson Carnot Lauren My Works spiral Mardi Notepad	Faktos Hot Shot ICED UP american Apollo Cairo TRIBE POINT DRAIN BRAIN	custageon Duncan Micro LIGHTNER Rockman PYCCINNI WEISS Oak Wood TAX
---	--	--	--	---

Font Pack 4

STEVES & WOOSTER BLACK ANDER II BONES Vampires Chalk ELF JAZZ FIRE GREEN Galleas rabbit ears	PURE METAL NEW YORK Medusa METROPOLIA SALTER WATER Chopin Benny FOX TROT Flemish	Gexo Birthday BORSE STEMS KING Lombard Paganini First Wires Muncho Madrid2	ANTIQUE DIGIT CAD Royal Carriage Crestmore Dickens Fundage Tixoni Anquillia DINER	Gesede EDITION Rexon Lilith MANIA MAZAMA Beatville SPARK
---	---	---	---	---

SKYFALL PD



Font Pack 5 is now available. The Font Packs on this advert all have 50 fonts in them, and are supplied on 4 discs. You can purchase all the packs for only £30, or at £8 individually. For details of our extensive software range, please send £1 for a demo disc and printed catalogue.



Telephone : 021 358 7078
PO Box 2220, Birmingham, B43 5RZ.



WARNING

COMPUTER NOISE
SERIOUSLY DAMAGES HEALTH



The Noise Killer

Silences all Archimedes machines

£24.50*

*Exclusive VAT. Shipping FREE within UK. Money Back Guarantee & Lifetime Warranty. The Noise Killer is a registered trademark.

Over 250,000 users worldwide



GREENWARE LIMITED

To Order:

Send your cheque made payable to Greenware Ltd with your order for:
The Noise Killer : £29.95 per unit inclusive VAT to:
Greenware Limited
First Floor, 52A Lansdowne Place, Hove BN3 1FG
Tel (0273) 720 888

ACORN APPROVED LONDON DEALER

Wide range of software and hardware stocked

ACORN AUTHORISED EDUCATION DEALER

TEACHERS' DISCOUNT SCHEME
NOW AVAILABLE — PHONE FOR DETAILS

Easy to get to
Train: WOOD ST Station
(British Rail)
Road: Bottom of M11,
just off North Circular
Tel No: 081-521 1784



AUTOMATIC SERVICES
217 WOOD STREET
WALTHAMSTOW
LONDON E17 3NT

PSION SERIES 3

ACCESSORIES	SOFTWARE
Mains £12	A/C & Exp £39
Print Link £24	Prof Finance £39
P C Link £54	Spell Checker £39
Leather Case £12	Berlitz Interp £54
Psion Books £13	Games Packs £27
Agenda 3 £59	Chess £39
Disk Drive £199	S3 Tools £39
Modems from £242	Sightmaster III £86

SSD	Flash	Ram
128k	£31	£45
256k	£54	N/A
512k	£75	£115
1mb	£145	£228
2mb	£228	N/A

Call for details
of other software
& Palmtops
PCMCIA Cards Stocked
PRICES EXCLUDE DELIVERY
& VAT.
SUBJECT TO AVAILABILITY
All Trademarks Acknowledged

PALMTOP COMPUTERS

128k Version £115
256k Version £155
New Series 3a !
Please Phone !

PSION MC400	£336
MITAC 1600A	£249
AMSTRAD PDA	£255
HP 100LX	£599

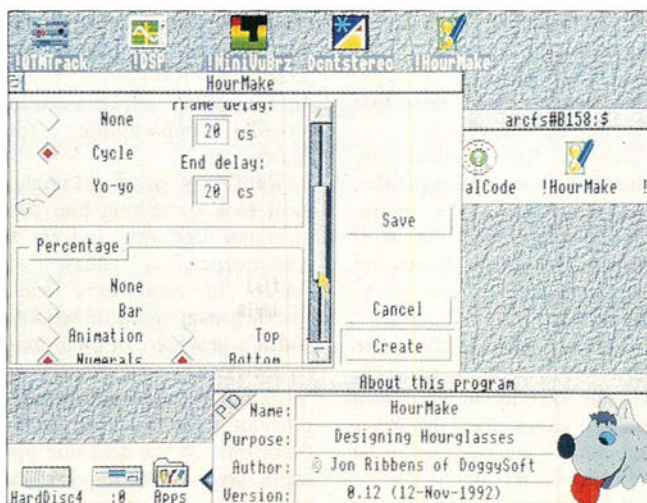
CLOVE TECHNOLOGY
0202 302796
43 Springbank Rd, Bournemouth
BH7 7EL



TIME FOR A CHANGE OF GLASS

THIS utility provides a simple way of changing the poorly-designed hourglass icon, used by Risc OS while the computer is occupied. *Hourmake* uses one window for the creation of a new hourglass, with options for the type of animation and whether LEDs or percentage displays are used.

You design a set of sprites, one for each frame of animation, then drag them to the *Hourmake* window. A quick click on Create produces a save box. Output is as a relocatable module, which re-designs the hourglass on initiation. *Hourmake* is available from APDL, disk code B158.



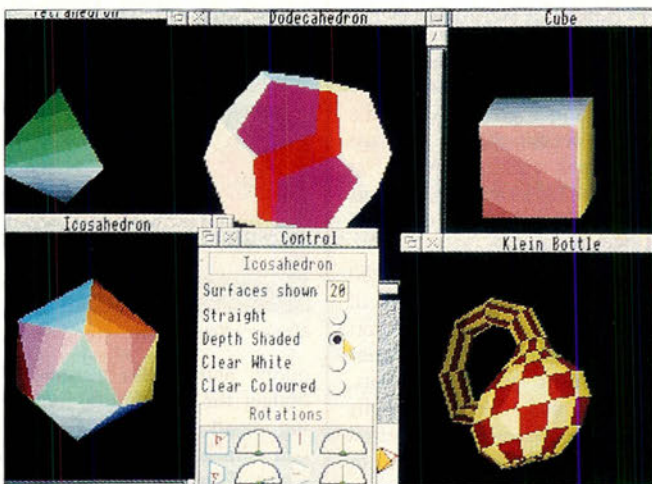
Irritated by the hourglass in the Risc OS desktop? There is a better way

AROUND THE SCENE

WE kick off this month's scene news, with details of some amazing vector graphics from coder John Hedley. Not only is the mini vector demo John has produced fast, it runs from the desktop in a window.

Under Arm2 a reasonable frame rate is achieved, but with Arm3, it seems to be about fifty frames a second.

Several differently-filled vector objects can be selected, and fill options, such as depth shading and transparent vectors are available. The idea is to display 4D solids on a 2D screen, but whatever the mathematic details are, it certainly looks pretty smart anyway. 4D solids is available from APDL, disc code B173.



OK. Magazine pages aren't the best venue for demonstrating 4D

FOG ON THE ARC

ANOTHER mini-demo hits these pages: *FogDemo* from Arm's Tech. French coder Armoric, an expert at coding plasma and liquid fx, has used some of his old routines to cre-

ate a completely new and original production. I won't spoil this one with any more details, but would recommend its purchase, as soon as it hits the PD libraries.

PIXELPAL

PIXELPAL is a handy utility authors of software on the Arc should find invaluable. The limited 16-colour desktop palette must be used for application icons, but limits the aesthetic qualities available to the designer.

PixelPal helps an artist round this. By mixing all 16 colours, 128 sub-shades are produced. *PixelPal* displays these different shades and, when one is selected, it will show the two-colour combinations. Some shades are unusable, but most look impressive.

PixelPal and many other PD utilities are available from Chris Beech PD, 30 The Deerings, Harpenden, Herts. AL5 2PE. Chris runs an alternative PD library, and prefers to swap his software for new PD.

CODERS

MANAGER of the prolific Arch Angels group, Fred Scherlig, is organising a large-scale programming project on the Arc. Fred is looking to recruit coders from the PD scene, to contribute to his Wings Project. I can't reveal details, but anyone interested can contact either myself at Acorn User, or Fred at 26 rue Cesar Roux, CH-1005 Lausanne, Switzerland.

In brief

Equinox

Equinox PDS will no longer supply commercial software, only distributing PD to existing customers. Orders and cheques should be made payable to G Scott. Partner Geoff Scott says: 'This is not the last the Acorn market will hear from us!'

PD Updates

Updates to several popular utilities are now available, including *StrongEd2* (v2.54), *DirMenu* (v2.22) and *MakeBoot* (v1.13). All are obtainable from Hensa over the Internet. A full index, and monthly updates is on email at hensa@uk.ac.hensa.micros.

Correction

In the September issue, the PD libraries and disk codes of the programs reviewed were lost. These are as follows: FYEO and Kysmet from the Datafile on disk Utils 94, and Lunchtime 4 (Yul Brynner's Memorial Toolshed) is from the Datafile. Demos are stocked by Arch Angel PD library and Datafile.

In to lunch

The team which produced Lunchtime magazine is refining the editor they used to produce Lunchtime 4. This will be their next PD release. According to Andy: 'Hopefully it will encourage mags from people put off by the programming.'

Q The Music

A new music player and tracker editor, completely PD, is to hit the scene. All tracker effects are supported, and if anyone finds a module which doesn't play correctly on Q The Music, Phoenix, the author, will do his best to correct the player. The editor, based around the popular *Protracker* on the Amiga, won't be ready for several months, but the QTM player should be released soon. Releases will be from Datafile.

Paul Wheatley (Cobra)

TESCO DELIVERS ACORNS

SCHOOLS up and down the country are currently taking delivery of the equipment they earned by assiduously collecting Tesco vouchers in the Computers in Schools promotion.

The statistics are as follows. Over 11,000 schools claimed more than 30,000 pieces of equipment, worth £6.5 million. This breaks down to 7000 computers, 17,900 software packages and 5300 other hardware items. Around 2600 items were ordered from the special needs computing section of the catalogue.

Essex came top of the league table with 609 computers, followed by Sussex with 424 and then Hertfordshire with 390. Herefordshire went from zero last year to 32 machines this year – presumably a couple of Tesco superstores have opened on the Welsh borders in the last 12 months.

Peter Talbot, education mar-

keting manager at Acorn, describes the scheme as 'an unqualified success' and says. 'What's nice about it is that it's good for everybody.'

Schools have undoubtedly benefited from the promotion. Staff at Acorn must be congratulating themselves on their success and Tesco bosses are surely smiling, but not everyone is happy.

Software companies, even those which participated in the scheme, have found it has seriously affected their business, and dealers are reported to be suffering even more.

In short, the anecdotal evidence is that nobody is buying IT equipment – they don't need to because they're getting it for free – and in the long term this could have a serious effect on suppliers, and thus consumers, in education.

When questioned about this, Peter Talbot said: 'One of the things we saw from last year's

campaign is that there was a large number of take-ups in areas that had never taken Acorn before, which in turn provides opportunities for dealers.

'Kent's a good example. Kent took something like 200 machines last year and, as a consequence, a couple of dealers in Kent have been working away on those schools and it's provided an opportunity for sales.

'From the software houses' point of view it's been a difficult time. It's a hard one but again, you see, the opportunity now exists, the machines are there. Schools are going to need software, increasing the demand in a very big way.'

However, Talbot is unforthcoming about whether the scheme will run for the third time next year. 'Who knows... the discussions are to take place,' is the only comment he will make.

CHEAP CD-ROM

THERE has been a burst of activity in the Archimedes CD-Rom drive market with the launch of machines from Cumana and Morley.

The Cumana 300 series is



The Cumana 300

multisession-compatible and operates in double speed mode at 300K/s. It offers a high speed access time of 320 milliseconds (random access) and its 64K buffer enhances the quality of graphics and Replay full screen motion video.

Morley's Revolution, developed with Sony UK, is also multisession-capable and Replay and Kodak PhotoCD-compatible. The Morley remit was to design a system which would be easy for teachers and



Morley's Revolution

pupils and within a sensible budget for all schools, including small primaries. Cumana had similar aims, hoping to make CD-Rom accessible to everyone by keeping the cost down. Both drives retail at £299, the difference is that the Cumana price includes VAT and £300 of software vouchers but you do pay £100 extra for a card. The Morley model does not need an expansion card.

Cumana is on (0483) 503121. Morley Electronics is on 091-257 6355.

MICROS FOR SPECIAL NEEDS



Special needs software in the classroom

THE annual Micros for Special Needs exhibition is to take place from 6 to 8 October at the Queen Elizabeth Hall in Oldham's Civic Centre.

Sponsored by Acorn, the show features stands from a range of companies producing equipment for special needs education, including hardware,

software and alternative input devices. The National Council for Educational Technology is running a stimulating seminar programme.

Micros for Special Needs is organised by Northwest SEM-ERC, which has recently moved and can now be found at 1 Broadbent Road, Water-sheddings, Oldham OL1 4HU.

BEAR CHEEK

EDUCATIONAL Resources In Computing, which goes by the acronym Eric and has a cuddly teddy bear of the same name as its logo, has released a wordprocessing/DTP package for young children. Aimed at five to 13 years, *BearWords* has three levels and is designed to be easy to use.

The program is frame-based and comes with a number of page layouts. You can import sprites, draw files and scans and use a variety of fonts, colours and borders. Pupils with special needs can access it via a Concept Keyboard or touchscreen. It comes with a jargon-free manual, takes up just 1Mb of memory and costs £42.95.

Eric can be found on (0903) 872400.



5716b	10/10 Early Essentials	10outof10	19.00
5709b	10/10 English	10outof10	19.00
5718b	10/10 Maths (Algebra)	10outof10	19.00
5708b	10/10 Maths (Numbers)	10outof10	19.00
1343b	1st Paint	Resource	34.00
5927b	Adventure Playground	Storm	17.00
5920b	All About Me	Northern M	14.00
5700b	Animated Alphabet	Sherston	19.00
5781b	ArcVenture 1- The Romans	Sherston	30.00
5713b	ArcVenture II- Egyptians	Sherston	29.95
5788b	ArcVenture III- Vikings	Sherston	30.00
5789b	Badger Trails	Sherston	36.50
5933b	Balloons & The Zoo	Topoloika	27.00

5928b	Best Four Adventure	ESM	39.60
5925b	Best Four Maths	ESM	39.60
1344b	Blob 1	Widget	18.00
1345b	Blob 2	Widget	18.00
5488c	CableNews	Linguinity	136.00
1029b	Cateby Manor	Resource	20.00
1358b	Concept Designer S/Ware	Longman	22.00
5766b	Connections	Sherston	27.00
5737b	Control Logo	Longman	25.00
1355e	Count with Blob - C Kbd	Widget	20.00
5763b	Crystal Rain Forest	Sherston	34.00
5916b	Darryl The Dragon	4Mation	19.00
1008b	Desk Top Stories	Resource	35.00
5701c	Desktop Folio	ESM	60.00
0935b	Dread Dragon Droom	Resource	29.95
0902b	First Logo	Longman	21.00
5702b	Freddy Teddy	Topologika	18.00
5703b	Freddy's Adventure	Topologika	18.00
1193b	Fun School 2 (-6)	Europress	16.98
1194b	Fun School 2 (6-8)	Europress	16.98
1195b	Fun School 2 (8+)	Europress	16.98
5704b	Fun School 3 (-5)	Europress	17.00
5705b	Fun School 3 (5-7)	Europress	17.00
5706b	Fun School 3 (7+)	Europress	17.00
5791b	Fun School 4 (-5)	Europress	17.00
5792b	Fun School 4 (5-7)	Europress	17.00
5793b	Fun School 4 (7+)	Europress	17.00
5491b	Genesis II	Oak	99.00
5761b	Graph_IT	Sherston	19.00
5782b	Hliighter	Sherston	32.00
5738c	Insight	Longman	68.00
1949c	Kid Pix	ESM	34.00
5747b	Linkword - French	Minerva	36.00
5748b	Linkword - German	Minerva	36.00
5746b	Linkword - Spanish	Minerva	36.00
0905c	Logo	Longman	54.00
5471c	Magpie	Longman	40.00
5798b	Micro French	LCL Soft	24.00
5931b	Naughty Stories Vol 1	Sherston	48.00
5936b	Noddys' Playtime (3-7)	Jump Bean	20.00
0928b	Numerator	Longman	38.00
5923b	Pendown Etoiles	Longman	49.00
1947b	Pendown Plus	Longman	67.00
1959b	Pendown v2	Longman	45.00
5929b	Phases #3	NW SEMERC	19.00
1011b	Pinpoint Junior	Longman	22.00
5784b	Pirates	Chalksoft	18.00
5707b	Podd	ESM	25.00
5926b	Primary Maths Course	LCL Soft	24.00
5455b	ProSHEET	Silicon V	39.00
5935b	Puddle & The Wardrobe	Topologika	27.00
5710b	Space Mission Mada	Sherston	23.00
5711b	Stig of the Dump	Sherston	22.00
5924b	Story	H & H Soft	16.98
1934c	Talking Pendown	Longman	57.00
5921b	Teachers Cupboard	Sherston	27.50
5712b	Teddy Bears' Picnic	Sherston	23.00
5934b	The Playground	Topologika	27.00
5485c	Topographer	Clares	62.00
1341b	Touch Games 1	Brill Comp	20.00
1342b	Touch Games 2	Brill Comp	20.00
5431b	Touch Type	Iota	35.00
5608b	Typing Tutor	Willow	23.90
5930b	Wizards Revenge	Sherston	17.00
5922b	Words & Pictures	Chalksoft	18.00
5715b	Worst Witch	Sherston	25.00

GAMES

5786b	Aggressor	Atomic	15.00
5468b	Air Supremacy	Superior	15.50
1981b	Aldebaran	Arc Angels	25.00
0936b	Alerion	Dabs P	11.00
0997b	Arcade Soccer	4th Dimens	17.00
PA0Ma	ArcOmnibus Games	RISC Dev	12.68
5435b	Battle Chess	Krisalis	20.00
5451b	Black Angel	4th Dim	25.00
1978b	Break 147 & Superpool	4th Dimens	25.00
5437b	Champions	Krisalis	22.00
5729b	Chequered Flag RISC OS 3	CIS	18.00
5532b	Chess 3D	Mic Power	16.98
5572b	Chocks Away Compendium	4th Dimens	26.00
5573b	Chocks Away Extra Missio	4th Dimens	14.00
5566b	Chopper Force	4th Dimens	19.00
5714b	Christmas Adventure	Krisalis	22.12
5577b	Chuck Rock	Krisalis	17.00
5941b	Crystal Maze (Due Oct.)	Sherston	34.00
5598b	Cyber Chess	4th Dimens	26.00
5452b	Cyborg	Alpine Sof	19.00
5599b	Demon's Lair	4th Dimens	19.00
5448b	Dungeon	4th Dimens	25.00
5728b	E-Type Compendium	4th Dimens	18.00
1983b	Ego: Repton 4	Superior	17.00
5476b	Elite Gold	Hybrid	32.00
5536b	Enter The Realm	4th Dimens	18.00
1982b	Fervour	Clares	18.00
5494b	Games Wizard	Leading Ed	25.00
5795b	Gods	Krisalis	19.00
5467b	Gribbly's Day Out	Coin-Age	18.00
5444b	Guile	Dream	22.00
1977b	Hero Quest	Krisalis	22.00

5725b	Holed Out Compendium	4th Dimens	17.50
1993b	Interdictor 2	Clares	25.00
1988b	Iron Lord	UBI Soft	14.00
5724b	James Pond	Krisalis	19.00
5423b	James Pond 2 (Due Oct)	GamesWare	21.00
1985b	Krisalis Collection	Krisalis	20.50
5595b	Last Ninja	Superior	18.00
5546b	Lemmings	Krisalis	18.00
5463b	Lotus Turbo Challenge 2	Krisalis	19.00
5568b	Manchester Utd Europe	Krisalis	19.00
5475b	Master Break	Superior	14.00
1996b	Microdrive Golf 2	CIS	24.00
5578b	MiG 29 Super Fulcrum	Domark	29.00
5794b	Oh No! More Lemmings	Krisalis	15.00
5420b	Omhar Sharif's Bridge	Krisalis	19.00
5561b	P I A Sam 1 - Arch	Superior	17.00
5569b	Pandora's Box	4th Dimens	17.00
5436b	Paradroid 2000	Coin-Age	20.00
5466b	Populous	Krisalis	21.00
1904b	Provocator	Comp Tutor	15.00
5422b	Quark	Oregon	19.00
5797b	Quest For Gold	Krisalis	17.00
5533b	Real McCoy I	4th Dim	22.00
5565b	Real McCoy III	4th Dim	22.00
5548b	Real McCoy IV	4th Dim	22.00
5597b	Saloon Cars Deluxe	4th Dimens	24.00
5474b	Saloon Cars Extra Course	4th Dimens	15.00
5434b	Sim City	Krisalis	22.00
5443b	Spheres of Chaos	Matt Black	19.00
5799b	Stunt Racer 2000	4th Dimens	25.00
1986b	Superior Golf	Superior	12.00
5790b	Swiv	Krisalis	18.00
5438b	Technodream	Superior	19.00
1997b	Virtual Golf	4th Dimens	25.00
5424b	Xenon 2	GamesWare	21.00
1179b	Zarch	Superior	19.00
5421b	Zool	Gremlin	14.00

New The Home Office Pack



This is available with the A4000 or A5000 and consists of Easiwriter, Datapower, Pipedream 4, PC Emulator, DR DOS 6 and an Audio Training Tape. It also contains demonstration versions of Prophet and Almanac.

GRAPHICS/DRAW/PAINTING

5785b	3D Construction Kit	Domark	35.00
5521b	ArcLight	Ace	43.48
1942b	ArcTist	4th Dimens	18.00
1103b	Artisan II	Clares	42.00
1938d	Artworks	CC	122.00
0962b	Atelier	Minerva	68.00
5488c	CableNews	Lingenuity	136.00
5912b	Chameleon	4Mation	33.00
PCHWb	Chartwell	RISC Dev	25.49
5914b	Craftshop 1	4Mation	19.00
5915b	Craftshop 2	4Mation	19.00
5749d	Designer V3	Techsoft	193.00
1937b	Euclid II RISCOS	Ace	49.00
5520b	Film Maker	Silicon V	86.91
1090c	Graph Box Professional	Minerva	102.00
0912b	Graph Box v2	Minerva	56.00
5761b	Graph_IT	Sherston	19.00
5442b	Illusionist	Clares	68.00
5734b	Image Animator	Iota	68.00
0934b	Imagery	Palette S	69.00
5919b	Jiglet	4Mation	19.00
1150b	Jigsaw	4Mation	19.00
1949c	Kid Pix	ESM	34.00
5497b	Morpheus	Oregon	28.00
5937b	Poster	4Mation	75.00
1095b	Presenter GTI	Lingenuity	65.00
5492c	PrimeArt	Minerva	68.00
0944c	Pro-Artisan 2	Clares	110.00
5509b	Render Bender II	Clares	75.00
5472c	Revelation II	Longman	74.00
5490c	Revelation ImagePro	Longman	125.00
5938b	smArt	4Mation	50.00
1912b	SolidsRender	Silicon V	78.00
1941b	SuperPlot	Silicon V	24.80
5512c	Titler	Clares	117.00
5940c	Vector	4Mation	75.00

INTEGRATED SOFTWARE PACKAGES

0900c	Advance	Acorn	88.00
5427b	DeskTop Office II	Minerva	74.00
5489c	Fireworks	Colton	TBA
0901c	Pipedream 3	Colton	71.00
0990c	Pipedream 4	Colton	118.00

LANGUAGES/COMPILERS

0938b	ABC III Basic Compiler	Oak	78.00
0107c	C Dev. System	RISC Dev	77.39
1907b	Cambridge Pascal	Oak	89.00
0946c	Desktop Assembler	Acorn	118.00
0945c	Desktop C	Acorn	178.00
0100b	Easy C	RISC Dev	49.00
0110b	Easy C Upgrade	RISC Dev	10.00
0905c	Logo	Longman	54.00
0895c	PC Emulator V1.8	Acorn	92.00
1906b	RiscBasic Compiler	Silicon V	77.00
5428b	RiscForth	Silicon V	77.00
1079b	Robo Logo	Silicon V	38.00

MUSIC/SPEECH/SOUND

5576b	ARtCtulate	4th Dimens	19.00
1091b	Armadeus	Clares	58.00
5522b	Digital Symphony	Oregon	39.00
1971b	MicroStudio	EMR	66.00
0835b	Notate	Longman	42.00
5461c	Oak-Recorder II	Oak	39.95
5486c	Rhapsody 3	Clares	77.00
1939b	Rhythm-Bed	Clares	38.00
5523b	Serenade	Clares	105.00
5457b	Sound Tracker	Leading Ed	36.00
5519b	Speech! Arch	Superior	16.00
5459b	Voice Generator	MJD	30.00
5513b	Vox Box	Clares	45.00
5441e	ZY-FI Stereo Speaker Sys	Zydec	34.74

PRINTER DRIVERS

5527a	Expression-PS	CC	15.00
0095b	HP Deskjet Colour Driver	RISC Dev	15.00
0090b	Star/Epson Colour Driver	RISC Dev	15.00
1940b	SuperDump	Silicon V	19.00
5503d	Turbo Driver - Colour	CC	95.00
5505c	Turbo Driver - BJ Series	CC	42.00
5508b	Turbo Driver -HP Deskjet	CC	42.00
5511b	Turbo Driver-Epson Styls	CC	42.00

SPREADSHEETS

0900c	Advance	Acorn	88.00
0929c	Eureka v2	Longman	81.00
0901c	Pipedream 3	Colton	71.00
0990c	Pipedream 4	Colton	118.00
5455b	ProSHEET	Silicon V	39.00
1903d	Resultz	Colton	119.00
5487c	Schema 2	Clares	105.00

UTILITIES

5446c	Almanac	Stallion	57.00
0957b	Ancestry	Minerva	58.00
1946b	ARC-DFS	Dabs P	21.00
5913b	Chatter	4Mation	33.00
1106b	Compression	CC	34.00
5456b	Disc Rescue	Look	28.00
5109c	Disc Sharer	Soft Soln	137.00
0094b	Hard Disc Companion II	RISC Dev	45.00
5445b	Invstgator II RISCOS 2	Leading Ed	21.00
5497b	Morpheus	Oregon	28.00
1914c	Office Tools	Silicon V	227.17
0895c	PC Emulator V1.8	Acorn	92.00
0097b	PlayBack	RISC Dev	19.00
1943c	Primemover	Minerva	75.00
1923b	ProCopier	CIS	5.00
5939b	Snippet	4Mation	32.00
PWPTb	Wimp Programmers Toolkit	RISC Dev	16.98

WORD PROCESSORS & EDITORS

0899c	1st Word + Version 2	Acorn	73.95
5917b	DBEdit	4mation	28.00
PDE2b	DeskEdit 2	RISC Dev	27.19
5427b	DeskTop Office II	Minerva	74.00
1170b	Easiword II	Minerva	44.00
5551b	Easiwriter Dict. French	Icon	26.00
5552b	Easiwriter Dict. German	Icon	30.00
5553b	Easiwriter Dict. Spanish	Icon	30.00
5507c	EasiWriter III	Icon	132.00
1112c	Impression Style	CC	97.00
1947b	Pendown Plus	Longman	67.00
1959b	Pendown v2	Longman	45.00
PGLTb	PolyGlot	RISC Dev	16.98
5495b	Primeword	Minerva	53.00
1933c	Startwrite	Icon	55.00
5453b	StrongEd	Stallion	22.00
1934c	Talking Pendown	Longman	57.00
1918c	Tech Writer	Icon	158.00
0940b	WordWise Plus Arch Disc	CC	29.00
1902c	Wordz	Colton	86.00

All prices are shown ex VAT.
*after price indicates NO VAT

THE ACORN USER

With this month's disc you can learn to use ProArtisan 2, have a wrestling match

PROARTISAN 2

ProArtisan 2 is the most important graphics release of the year. See for yourself why this is with our exclusive fully-functional demo on the cover disc

ProArtisan 2 is the latest incarnation of Clares' popular art package, and we've got an exclusive demo for you on this month's cover disc. Not only is the demo completely functional (apart from saving and printing), but Clares has provided full instructions and files for you to create the picture on the opposite page.

A short tutorial

To get you into ProArtisan 2 as quickly as possible the following tutorial takes you through manipulating an image to introduce some of the tools.

Instructions to use a particular menu item are written as Paint -> Fill -> Plain where Paint is the name of the icon in the Tool pane, Fill is the item in the Paint menu and Plain is the item in the Fill submenu.

If possible use a multisync monitor in Mode 28; if not, use Mode 15 instead.

1 Load ProArtisan 2 and click on the icon. Create a canvas size 400 pixels by 400 pixels.

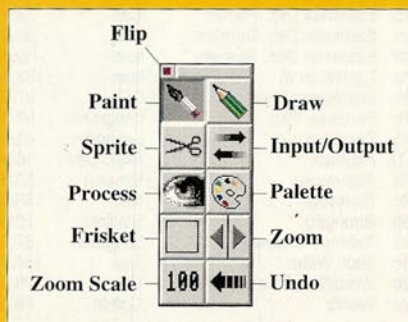


Diagram 1: The Tool pane

2 Click on the Draw icon and press Menu with the pointer on the canvas. Click on the Grid item to turn the grid on. Set the grid size to 48 units in the Grid submenu.

3 Click on the Sprite icon, which brings up the Sprite pool window. Drop the file called Cheetah onto the Sprite pool window to load it into the pool.

4 Click on the Vertical Sprite Flip icon (up-down arrow) to flip the cheetah vertically.

5 Click on Sprite -> Sphere and drag out a sphere with a radius of two grid units in the lower half of the screen. Drag out the sphere horizontally to lock to the horizontal grid lines. Dragging diagonally locks to diagonal grid points.

6 Darken the image using 40% Process -> Filters -> Darken.

7 Click on Sprite -> Vertical Sprite Flip icon to flip the cheetah vertically.

8 Add another sphere the same size but overlapping by one unit as shown in Diagram 2.

9 Select white from the Palette and set the Opacity slider to 20%. Goto Paint -> Brush Shape and select a medium brush size. Using Paint -> Paint lighten the area indicated on the top left of the top sphere.

10 Change the colour to black and using 20% Opacity again, darken the area indicated.

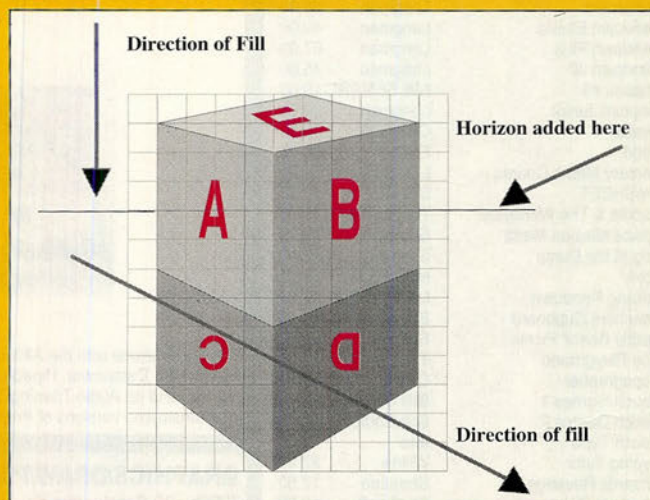


Diagram 3: Filling the cubes and creating the horizon

11 Set Opacity on the Palette to 100% and choose a blue on the edge of the palette. Using Paint -> Fill -> Plain fill the background. Use Paint -> Paint with a small brush if the fill does not get all areas, particularly any overlap that you got when doing stages 9 and 10.

12 Set Sprite -> Transparent to the same blue from stage 11.

13 Using Sprite -> Cut -> Rectangular cut out the two spheres in one sprite. Grid lock should still be active enabling you to cut right at the edges of the spheres.

14 The sprite will appear in the Sprite pool. Give it a name, 'Spheres'.

15 We are now going to create a cube. Select white from the Palette and click on Process -> Clear Screen to clear the screen to white.

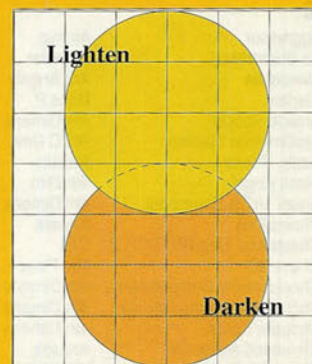


Diagram 2: The two circles

16 Ensure that you have the Cheetah sprite selected.

17 Using Sprite -> Distort drag out a distort box 4 by 4 units (start from 3 squares in and 3 down - ignore the half square at the top) and using Adjust drag the control points to provide the shape of the area

COVER DISC

with a greasy pig or brush up on your irregular verbs in *Info

marked A in Diagram 3. When you click Select the Cheetah is plotted into the area.

18 Do the same for the areas marked B and E.

19 Click on the Vertical Sprite Flip icon to flip the cheetah vertically and then use Sprite -> Distort to do areas C and D.

20 Set Draw -> Style to do filled areas.

21 Toggle the Frisket icon to Create Frisket - a solid square.

22 If a Frisket is set (shown as areas of red) do a Process -> Clear Screen to remove it. You must do this anyway when doing steps 30 to 32.

23 Select Draw -> Line.

24 Bring up the Palette and click the red colour; there will only be red or white cross hatch to choose from. If the choice is black or cross hatch, the colour can be changed to red in the Process menu with

the Frisket Colour option.

25 Now draw around area D by clicking at the four corner points. Grid lock should still be on. The area should turn red indicating a Frisket.

26 Click on Process -> Invert Frisket and now the only area visible should be area D. This is the area that will be affected by the next process.

27 Toggle the Frisket icon to Frisket Active - diagonal lines.

28 Apply Process -> Filters -> Darken with a value of 50%.

29 Repeat steps 22 to 29 but on area C instead of D and use a value of 35% instead of 50%.

30 Repeat steps 22 to 29 but on area B instead of D and use a value of 25% instead of 50%.

31 Repeat steps 22 to 29 but on area E instead of area D. This time you need to do a Process -> Lighten with a value of 25%.

32 Toggle the Frisket icon to Frisket Inactive.

33 Set the line thickness in Draw -> Style to about 10 and the style to outline only. Using Draw -> Line draw a horizon line in a blue (drag out the line and use Adjust to finish the line) from the edges of the cube to the edge of your window, as shown in Diagram 3.

34 Use Paint -> Fill -> Plain with the same colour as the line and fill above the horizon.

35 Turn the grid off by pressing CTRL-G on the keyboard.

36 Select Paint -> Fill -> Angled and also tick the Dither option in the Fill menu. Now select Paint -> Blends 4.

37 Fill the area at the top by dragging the fill arrow from just below the top of the canvas to the horizon line.

38 Select Paint -> Blends 3 and click on the Blends flip



The finished picture

icon so that the Blend runs light to dark. Drag the fill arrow from the left of the cube to the bottom right of the canvas as shown.

39 Ensure that Spheres is the current sprite in the pool.

40 Click on the sprite in the pool and place the spheres on the bottom half of the canvas. That's it: hopefully it should look like the above.

OMNIDESK

The ultimate desktop utility

Welcome to *OmniDesk*, the most flexible desktop toolkit ever. This month we've got two utilities which will prove invaluable to budding Wimp programmers.

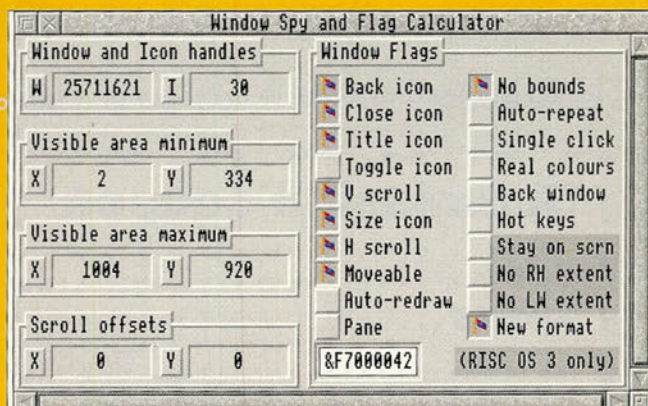
If you've ever tried programming the Wimp, you'll know that working out flag values for windows and icons

is a complete nightmare, unless you're one of those people who can convert 32-bit numbers from binary to hexadecimal in your head. For all you mortals, however, *OmniDesk* now provides the answer to your problem: the *Window Flag* and *Icon Flag* utilities.

The *Icon Flag* window shows detailed information about the icon under the pointer, from its handle to its flags to its button type. And not only can you spy on the flag values for icons on the desktop, but you can enter your own settings for colour, ESG etc and *OmniDesk* will tell



The Icon Flag window



Calculating window flags

you the value of the flag word you need.

The *Window Flag* window is similar, except - surprise, surprise - it displays information

about the window under the pointer. All the details are shown, and, of course, you can set the flags to your own specification.

HEIMDALL



The subgame is called 'Slippery Pig', and the idea is to run around the arena, lunging at the pig, trying to catch it. Easier than it sounds, this is the sort of thing the Saxons used to do a lot. And the Vikings. Apparently. Try the following keys. Good luck...

Z	Left	L	Down
X	Right	P	Up
Space	Dive		

At last, Krisalis' role-playing arcade adventure is being released, and we've got one of the subgames on the cover disc

*INFO



French verbs, mad graphical animations, games and serial port pokes. What are you waiting for? Jump on in to the world of *INFO. Quite, quite mad, but a barrel of laughs. See p113.

BASICS



Learn to program in Basic the easy way: with our Back to Basics course. This month we tackle the thorny subject of control statements, starting with IF-THEN constructs. See p109.

Problems?

Cover discs are thoroughly tested at each stage of production, but with such a large batch it is possible that one or two faulty discs may slip through. If you should receive a faulty disc it will be replaced free of charge. Send it with your name and address to:

Stanley Precision Data Systems Ltd, Cavendish Courtyard, Sallow Road, Corby, Northamptonshire NN17 5DZ

WANT TO MAKE MONEY?

We want your programs, and we want to pay you for them. We're interested in anything that we can put on our disc, from handy little utilities to full-blown applications, and we'll gladly hand over the readies for them.

Pop your handiwork on a disc, fill in the coupon, and send it to the address below. Of course, if you don't want to destroy your pristine copy of Acorn User, just jot the details on a piece of paper and send it in. We're not proud.

Please enclose an SAE if you would like us to return your disc.

Submission coupon

Name

Address

..... Daytime telephone number

Short description of submission

.....

Send to: Acorn User, Redwood Publishing, 101 Bayham Street, London NW1 0AG.

THE ColourCard

FOR THE ARCHIMEDES

MORE RESOLUTION
MORE COLOURS
MORE SPEED
LESS FLICKER



HATS OFF TO COLOURCARD



A new graphics accelerator card for the Archimedes, the ColourCard brings a host of improvements to the video capabilities of any Archimedes A300*, 400*, 540 or 5000 series computer.

The simple to fit, single width expansion card is completely compatible with all RISC OS desktop software, but brings much higher screen resolutions at higher screen refresh rates (less flicker and easier on the eye).

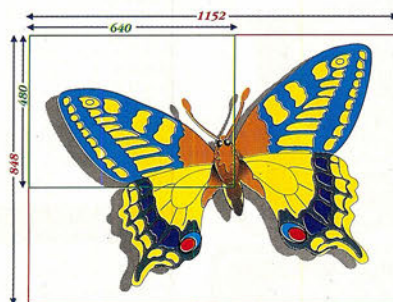
In 16 and 256 colour screen modes all the colours are selectable from 16 million hues. This means scanned pictures can be seen with 256 true grey-levels on screen and that you are no longer restricted to the preset Acorn palette. Some applications, such as ArtWorks, can provide better screen colouring using the new palettes.

In addition, the ColourCard offers 15 bit-per-pixel true colour screen modes having over 32,000 colours on screen at once. Although these screen modes are not yet desktop software compatible, it is expected that programs will become available that take advantage of the modes. The ColourCard is supplied with a 24-bit preview utility to show 24-bit Clear files in stunning full colour.

The ColourCard reduces the load on the main Archimedes memory and so allows the ARM processor to run much faster than would normally be possible in high resolution screen modes. Depending on machine and screen mode, graphic operations can be up to twice as fast.

The ColourCard revolutionises DTP and graphics work, and opens up the world of true-colour graphics to the Archimedes user for the first time.

The ColourCard has been developed and is backed by



ColourCard offers 3 times the pixel area of standard Acorn VGA mode 27.

the largest and most successful Archimedes developer. It is available now, and for added peace of mind comes with a 14-day, no quibble money back guarantee.

KEY COLOURCARD FEATURES:

- ArtWorks version 1.1 now supports 32,000 ColourCard screen modes
- Video pass through for guaranteed compatibility with all software without having to unplug your monitor
- 15 bpp (ie 32,000 colour) screen modes
- No quibble money back guarantee
- A3000 version now available
- New configurable screen update speed

(The ColourCard is compatible with all multi-scanning monitors. †Only higher scanning rate monitors can manage 1152 x 848 resolution. Lower scanning rate monitors may display some resolutions at lower refresh rates. *A300 and early A400 computers may need an additional Genlock connector to be fitted internally.)

Price £249.00 +£6 p&p + vat (£299.62 inc)
Available from all good dealers and from:



15 Witney Way, Bolden Business Park,
Bolden Colliery, Tyne & Wear, NE35 9PE
Tel: 091 519 1455 Fax: 091 510 1929



Computer Concepts Ltd
Gaddesden Place, Hemel Hempstead,
Herts, HP2 6EX
Tel: 0442 63933 Fax: 0442 231632

E&EO Details are subject to change without notice.

16 colours

256 colours

32,000 colours

SOME OF THE SUPPORTED SCREEN RESOLUTIONS

1600 x 600	65Hz
1024 x 768	72Hz
1152 x 848	64Hz†
1280 x 512	80Hz
800 x 600	85Hz
1152 x 424	80Hz
800 x 300	80Hz
576 x 424	90Hz

Vantage One DIRECT

Dept AUB3, FREEPOST LS5106,
Northwood House, North Street, LEEDS LS7 2AA

0532 374000

Formerly Software Bargains and Mercury Games we have been well-established within the Acorn market for many years. Vantage One Direct will enhance the quality of service customers know they can expect, and here's why ...

- * Prices all include VAT!
- * Delivery is **FAST** and **FREE!** (UK mainland)
- * Send us your order **FREEPOST!** Don't pay to place an order!
- * **FREE** quarterly news brochure - just send us the coupon opposite (FREEPOST!) to reserve your copy. Details of all the latest releases, product descriptions, and exclusive special offers to you, **DIRECT.**
- * No minimum order level
- * Discreet packaging for Christmas surprises!

**Fast, friendly improved Mail Order service
for YOUR Archimedes series computer!**

JOYSTICK PACKS!

- Pack One** Joystick Interface V2.4 and 1 X Python 1 £49.95
- Pack Two** Joystick Interface V2.4 and 2 X Python 1 £59.95
- Pack Three** Joystick Interface V2.4 and 1 X Superpro Auto joystick £51.95
- Pack Four** Joystick Interface V2.4 and 2 X Superpro Auto £61.95



COLOUR PRINTER SPECIAL

9 resident built-in fonts, 43KB memory, alternative ribbon drive for black or colour printing and lots more!
Demo sheet available!
Price includes VAT, cable & carriage (UK mainland only)

SL95 Colour £249.95



Software Bargains & Mercury Games
Dept AUB3, C/O Northwood House, North Street, LEEDS LS7 2AA
TEL: 0532 374000 FAX: 0532 423289

No Buy-outs, no take-overs, Vantage One Direct is the new look Software Bargains and Mercury Games!

Compare our price

ARCADE GAMES

	SRP	Our Price
2067 BC	19.99	16.95
Aldebaran	34.90	28.95
Aliped	14.95	12.95
Axis	25.00	20.95
Buy both Bambuzle and Blitz only...£24.95!		
Black Angel	34.95	30.50
Break 147/Superpool	34.95	30.50
Chuck Rock	25.99	21.95
Colony Rescue	14.95	12.95
Cyborg (2Mb Required)	25.95	21.95
Cycloids	25.00	21.95
Demon's Lair	25.95	21.95
Dungeon	34.95	30.50
EGO: Repton 4	24.99	21.95
Elite	39.95	33.95
E-Type Compendium	25.95	21.95
Fervour	24.99	21.95
F.R.E.D.	20.00	16.50
G O D S	25.99	21.95
Gribby's Day Out	25.99	21.95
Guile	29.95	18.95
Hero Quest	29.99	25.50
Humanoids/Robotics	24.95	21.95
Iron Lord	19.95	15.95
Ixon	25.00	21.95
James Pond	25.99	21.95
Killer Bugs	24.95	21.95
Lemmings	25.99	21.95
Loopz	24.99	9.95
Lotus Turbo II	25.99	21.95
Nebulus	25.99	21.95
Oh No! More Lemmings	19.99	16.95
Quark	24.95	21.95
Raw Power	25.00	21.95
Repton 3	24.95	21.95
Robocod	25.99	21.95
Serpents	19.95	16.95
Spheres of Chaos	24.99	21.95
S.W.I.V.	25.99	21.95
Technodream	24.95	21.95
The Last Ninja	24.95	21.95
Wolfpack	20.00	16.95
Xenon 2	25.99	21.95
Zool	25.99	21.95

ADVENTURE GAMES

Enter the Realm	25.95	21.95
Heimdal	29.99	25.50
Pandora's Box	25.95	21.95
Populous	29.99	25.50

MIND GAMES

Battle Chess	29.95	25.50
Cardmania	24.95	21.95
Chess 3D	24.95	21.95
Cyber Chess	34.95	30.50
E-Numix	24.95	21.95
Mah-jong - The Game	22.95	19.50
Mah-jong Patience	22.50	19.25
Omar Sharif's Bridge	29.99	25.50
Tiles	19.75	16.95

SIMULATION GAMES

Air Supremacy	24.95	21.95
Chocks Away Compendium	34.95	30.50
Chopper Force	29.95	25.50
Dreadnoughts	34.95	29.95
Dreadnoughts - Bismarck	16.95	14.50
Dreadnoughts - Ironclads	16.95	14.50
Flight Simulator Toolkit	44.99	29.95
Interdictor II	36.00	29.95
MicroDrive 2	34.95	29.95
Mig-29 Fulcrum	29.99	21.95
Saloon Cars Deluxe	34.95	30.50
Sim City	34.99	29.95
Stunt Racer 2000	34.95	30.50
Waterloo	25.95	21.95

COMPENDIUMS

Arcade 3 Compilation	15.50	12.95
Zarcon Invasion, Mazey Man, and Bounce-a-ball	15.28	12.95
Arcadium	29.95	25.50
Draughts, Reversi, Backgammon and Quadline	29.95	25.50
Champions	29.95	25.50
Manchester Utd, Jahangir Khan Squash, Boxing Manager and World Class Leaderboard	24.95	21.95
Play It Again Sam	24.95	21.95
Conqueror, Rotor, No Excuses and Hostages	24.95	21.95

	SRP	Our Price
Play It Again Sam 2	24.95	21.95
ArcPinball, Masterbreak, Repton 2 & Zarch	34.95	30.50
Real McCoy 2	34.95	30.50
Apocalypse, Holed Out, The Olympics, Inertia	34.95	30.50
Real McCoy 3	34.95	30.50
Neyron, Powerband, Dropship, The Wimp Game	34.95	30.50
Real McCoy 4	34.95	30.50
Galactic Dan, Grievous Bodily ARM, Cataclysm, and X-Fire	29.99	25.50
The Krisalis Colln	29.99	25.50
Mad Professor Mariarti, Terramex, Pipemania, and Revelation	29.99	25.50

SPORT GAMES

Brian Cloughs Football	19.99	8.95
Champions	29.99	25.50
Holed Out Compendium	25.95	21.95
Manchester Utd Europe	25.99	21.95
MicroDrive 2	34.95	29.95
Quest for Gold	25.99	21.95
Virtual Golf	34.95	30.50

Joysticks & Interfaces

Joymaster (for A3010)	19.95
Joystick Interface V2.4	39.95
Joystick Extension Cable	9.95
Superpro Auto	15.27
Quikshot III Turbo	14.25

Music & Sound Applications

Armadeus	82.00	69.95
Armadeus Sound S. Board	154.95	144.95
Desktop Tracker	70.44	69.95
Digital Symphony	50.00	44.95
Notate	69.33	58.95
Playback	22.33	18.95
Printer Port Sampler	49.95	49.95
Rhapsody 2	61.95	51.95
Rhythm-Bed	49.95	44.95
Score Draw	61.95	51.95
Serenade	135.00	129.95
Sound FX Maker (intro prog)	39.95	34.95
Sound Sampler & Midi Card	93.99	89.95
Sound Track K/bd Trainer	93.44	79.50
Speech	24.95	21.95
Vox Box	61.95	51.95

LEISURE/VARIOUS

Ancestry	82.19	69.95
ARCTiculate	25.95	21.95
ARCTist	25.95	21.95
Games Wizard	19.95	19.95
Photopia	49.95	41.95
Shareholder	125.00	112.95
Shareholder Professional	195.00	175.50
Titler	149.95	134.95

UTILITIES

ALPS System	35.71	29.95
ArcDFS	29.95	25.50
ARCS 2	20.00	17.95
Arch. Operating system	22.08	19.95
Archimedes Visual Backup	49.95	42.50
ArcLight	70.44	59.95
ArcMonitor	25.50	21.95
Creator	45.77	38.95
Desktop Assembler	175.08	148.95
Draw Paint and Plot	46.95	25.95
Euclid	117.44	99.95
Font FX	11.75	11.75
Genesis II	152.75	129.95
Genesis Plus	82.20	69.95
Gerber Plot	75.00	63.95
GraphBox Professional	152.69	129.95
GraphBox V2	82.19	69.95
Hard Disc Companion II	52.88	44.95
Illusionist	99.95	89.95
Instigator	49.95	41.95
Investigator 3	56.95	56.95
Knowledge Organiser 2	99.95	89.95
Mogul	35.19	26.50
Morpheus	34.95	31.95
PC Emulator V1.8	116.33	116.33
Reform	TBA	TBA
RISC Basic Compiler	99.95	89.95
Shape FX	11.75	11.75
Sleuth	57.58	49.95
SolidsRENDER	99.95	89.95
Splice	46.94	39.95
Tween	46.94	39.95
Type Studio	52.88	44.95

Educational Discount available
Official school orders welcome; phone for info leaflet

WHAT YOU SEE IS WHAT YOU PAY! Everythi

Kodak has a vision of the digital future, and Photo CD is a step on the way there. Graham Bell looks at the release version for Acorn machines



JANET WOOLLEY

PHOTO CALL

First things first. The concept of Photo CD is very simple: a Photo CD is a recordable CD-Rom, or 'gold disc', which can store up to 100 or so colour images. Kodak intends that you take your holiday snaps to Boots to have them processed conventionally, but instead of having normal prints on paper, you have the negatives scanned and written onto a Photo CD.

The pictures can be viewed on the family TV, via a modified hi-fi CD player. Or in our case an Acorn machine. The whole process costs around £5 for the blank gold disc and just over a tenner for every roll of film you have scanned. Later, you can have another film added to the existing pictures on the disc.

While Kodak's vision of

What you need

First you need a Photo CD-compatible drive. This includes the capacity to multi-session, so that you can add films to the CD-Rom in successive stages, rather than in one go. You will also need an expansion card with the upgraded CDFS. If you already have a SCSI card and wish to upgrade, contact your original dealer. They will provide a Rom upgrade and supply a new version of *ChangeFSI*. For example Acorn offers its new Photo CD-compatible SCSI card (SCSI Mark 3 Adaptor Card) for £293.75. An upgrade to an existing Acorn SCSI costs £23.44.

For those starting from scratch, there are a number of options. The 600 series from Cumana provides fast access. It also has a low-price 300 range costing only £299 inc VAT plus £100 for its card. Morley offers its CD-Rom Revolution Drive at £299 plus VAT, including card.

Photo CD as a visual storage medium – a replacement for the family photo album – is intriguing, it also seems fanciful. It could be seen as part of an attempt to digitise and integrate most family entertain-

ment – CD audio, CDI and so on – but in reality most people don't want to view their holiday snaps on TV. Like CDI (Compact Disc Interactive), the idea may be stillborn in the consumer market. If

Photo CD is unlikely to succeed as a mass medium, its significance is that it gives computer users affordable access to quality colour scanning. The Kodak Imaging Workstation, used to create a Photo CD, produces scans considerably better than any of the low-cost desktop scanners that can be connected directly to the Archimedes.

So students presenting project work using *Magpie* or *Genesis*, artists wanting to incorporate real-world images into their work in *Revelation* or *ProArtisan*, and publishers putting photographs in newsletters and magazines can use Photo CD instead of buying a colour scanner. Even with our eight-bit display system, the screen images are amazing.

How it works

A Photo CD can be made from any set of 35mm negatives or 35mm slide film: at present, existing prints and artwork cannot be scanned in using Kodak's normal imaging system. Each picture is stored on the disc in a special file called an 'image pack'. The pack in fact contains five separate images, in a range of sizes from 192 by 128 pixels right up to 3072 by 2048 pixels. The middle resolution of 768 by 512 is known the 'base' image, and the others as Base/16, Base/4, 4xBase and 16xBase.

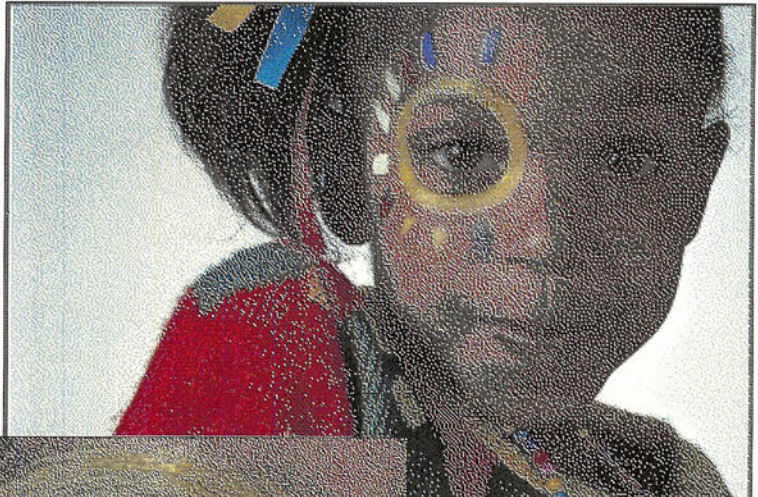
Each of the five images is stored in an encrypted 24-bit colour format known as YCC, but with the larger two sizes they are stored as a set of differences from the 'base' image (rather than as a complete image in themselves), and are additionally compressed. The total image pack takes up five or six megabytes of space on disc, but the largest image can be up to 18 or 24Mb when decompressed.

Using the system

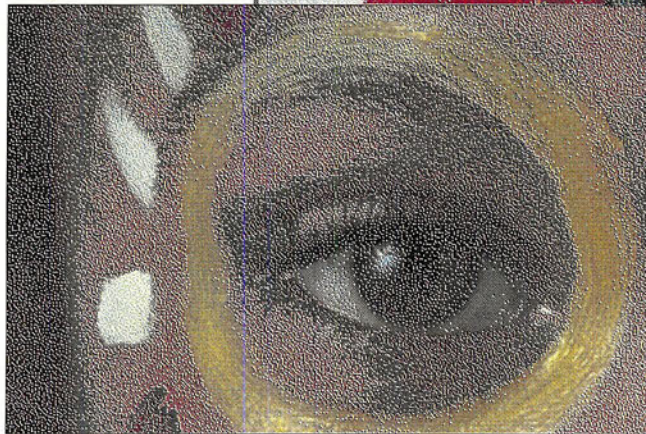
The intention is that you use the version with the resolution you need: a postage stamp size

image in a DTP document can be based on the Base/16 image, but if the image is to cover a full page, then the biggest image in the pack is used.

There are other variants of Photo CD too: the professional version for the colour reprographics and printing industry stores images 64 times larger than the base image, and a third ver-



Zooming in on the action



sion stores medical images. Photo CDs can be read in a standard CD-Rom drive, but only some are fully Photo CD compatible.

Many can read only the first

roll of film scanned on to the gold disc: only 'multi-session' drives can read the images added subsequently.

The Sony CD-Rom drive supplied as part of Acorn's Multimedia Expansion Unit is both multi-session and also 'double speed' – another significant benefit as it halves loading times for large files.

All CD-Rom drives connect to the computer's SCSI bus, so a SCSI expansion card is also a vital component: ensure the card includes CDFS, the CD-Rom filing system. Suitable cards come from Acorn, Cumana, Morley and others. See the boxout for more details.

But the details of the storage aren't so important when you're using the system. Current Risc OS machines can handle images up to 4xBase – the maximum 8Mb of memory isn't enough for 16xBase – but the module can also be set up to extract detail sections of the biggest images.

Soft support

At present, support for the module is provided in a new version of *ChangeFSI*: it will extract an eight-bit colour sprite, at 768 by 512 pixel

Some tips

1 It's important to realise that once an image is written to Photo CD, it cannot be erased. So rather than sending your film away to the processors to put on gold disc right away, get it developed and then choose which negatives you want to add to your collection on Photo CD. A list of frame numbers should be enough for the processors to scan only the images you want.

2 Use good film. The largest 16xBase images are so detailed they begin to show the grain of the film.

Photo CDs can be scanned from slide film too, which can often be of higher quality, but bear in mind it's best to leave the slides unmounted until after you've had the film scanned.

3 Once decoded, the image files are big; up to 24Mb if a 16xBase image is stored as a CMYK Tiff file. It is important to ensure you have enough memory and disc space on your Archimedes.

resolution, which can then be saved or modified using any image manipulation package. Acorn is also providing software developers with a module to handle all the complexities of retrieval via a series of SWI calls that extract images from the Photo CD.

This means that support for the module can be built in to applications, and it's likely that



A contact sheet is provided in the basic support software



Zooming in...

Price box

There are a number of high street stores that offer Photo CD processing, including Boots. At present the charge for the CD itself plus one 24 exposure film, is about £15. Successive films are cheaper.

Many suppliers offer a complex pricing system. Currently Boots are charging £4.99 for the CD-Rom plus £12.99 for up to 28 photos, £16.99 for up to 39. Then for successive additions you can add a minimum of 10 shots for £7.20 plus 60p for each shot over 11.



... on different resolutions: you take your pick

you will soon be able to drag Photo CD images directly into page make-up programs like *Impression* and *Ovation*, or painting packages such as *Revelation ImagePro* and *Pro-Artisan 2*

Colour on the Archimedes is confusing. Some parts of the system, for example the way *Draw* or *Paint* define individual colours, are 24-bit colour. That is, you can define any object or pixel to have any 'colour' from 0 to 255 red, 0 to 255 green and 0 to 255 blue – eight bits of information for each colour 'channel', or 24-

27, four of the eight bits of colour information for each colour are thrown away – the display is only 12-bit colour.

Furthermore, in 256-colour modes like 15 or 28, even more information is lost: the display is something between six and eight-bit colour. Display cards from State Machine and Computer Concepts improve the display to an extent – though the main effect is to increase the resolution of the screen, true eight-bit desktop displays are possible with either card.

Future hardware from Acorn is likely to include full 24-bit displays using Arm Ltd's Vide20 chip.

Image output

Future versions of *Impression* and *Artworks* allow the definition of real CMYK colours, which are stored as 32-bit values, and output to Postscript as 32-bit CMYK colour.

It will be possible to convert Photo CD images to CMYK and store them as 32-bit Tiff files, which can then be used in an *Impression* document, just as RGB sprites are used now.

Developments such as these should open the way, not only to easy access of images via PhotoCD, but also to better colour separation of those images as printed output.

Talking heads

PeteWorrall, education advisor

'There are a whole range of exciting roles for Photo CD in education. Consider the notion of our relationship to our environment: the real world, not an educational publisher's world.'

'For example, how about a three-disc collection based on the West Midlands, shifting from a macro to micro viewpoint. The first disc is the West Midlands, disc two is the black country, disc three is Tipton. Imagine every picture lively, busy and packed with information and colour.'

'Different categories might include places of worship, lifestyles, heritage, industry, entertainment and communications. Consider for a minute all those local photographers with negatives hidden in drawers, recording first-hand accounts, specific events, landmarks in the social and cultural history of a neighbourhood. This is all relevant material that enhances understanding of the world we live in, and could form starting points for further research. I can't wait to get started.'

'Another idea which appeals to me is to have clear instructional visuals on say "How to replace a fuse and rewire a plug". The photographs could emphasise the safety aspects and be used to complement a practical technology lesson in school. Using the excellent zoom facility the detailed bits can be viewed without loss of screen resolution.'



Jack Kreindler, graphics columnist

In the genre of home-computer entertainment, Photo CD has the potential to revolutionise games imagery. With the huge compression rates, but still slow decompression times, the technology would probably suit graphically less-intensive types of game, like golf simulators and adventures: just imagine being able to enter a room in which there stands a bookshelf, and then move towards any one book to observe the colour and texture of its cover. That's the sort of depth of interactive immersion I'm sure we'll see.

Then there is OPI: this allows extremely high resolution images to be incorporated into printed documents but displaying only low-res versions in the software, saving vast amounts of Ram.

Photo CD will provide a very powerful source medium for such images. Stored in 16.7 million colours, appropriate printer drivers could help output stunning documents, and Kodak already offers public facilities for writing images stored on film or slide on to CD-Rom, so documents could also include customised imagery using Photo CD.

Finally is anyone out there interested in making life easy for medical students? Photo CD could take most of the pain out of learning anatomy. How about hypertext (click on word and explanation pops up) on to a visual database of the human body? I'd give my right arm for something like this.



Video and Graphics from Wild Vision

Designers, manufacturers and purveyors of fine expansion cards for the Acorn range of 32-bit microcomputers*



...and a MONSTER offer!

**FREE DINOSAUR CLIP ART DISC
WITH EVERY PRODUCT PURCHASED!**

Or claim a pair of tickets for Acorn World 93.

Amazing but true! Wild Vision are giving away a fantastic 3 1/2" floppy disc containing a selection of super dinosaur images in Draw file format with every product purchased before 22nd October 1993**. Alternatively, we can send you two complimentary tickets for the **monster** of computer exhibitions, Acorn World '93 at Wembley, 29th-31st October 1993.

Just state your preference when you order.

Wild Vision Digitisers

New! ScanLight Video 256 combined video digitiser and scanner

This is the two-in-one solution to your image requirements: a 256-greyscale video digitiser and scanner built into one single-width expansion card, thus saving space and money! 400dpi scanner head supplied, together with Computer Concepts' renowned ScanLight Plus image manipulation software. Price £220.00†.

GreyHawk

True 8-bit greyscale video digitising in real time.
Excellent value at an introductory price of only £99.00.



Hawk V9 Mk II

The ultimate real time colour video digitiser! State-of-the-art technology provides hardware processing capabilities unique to the Hawk V9 Mk II. Price £269.00.

Wild Vision Genlock and Overlay

Chroma-Genlock

Wild Vision's Chroma-Genlock lets you superimpose computer graphics onto video to achieve effects like captions, credits and animation. Price £215.00.

Wild Vision Graphics

ColourCard

ColourCard offers more speed, more colours, more resolution and less screen flicker. It is suitable for Archimedes 300/400/500 series machines††, the A5000 and A3000. Screen update speed is configurable to 12 or 24Mhz, broadcast resolution PAL modes are provided for your video needs, and 32000 colour modes provide excellent preview facilities. All this on one card – at one price. £249.00.

The above cards have all been designed and manufactured to comply fully with Acorn specifications for expansion cards. Software for all the above products has been developed in conjunction with Computer Concepts.

Also available from Wild Vision

- Chroma 150 PAL encoder unit: record your computer output to video£185.00
- A3000 Expansion Box: use up to three Archimedes expansion cards with your A3000£139.00
- Hawk V12 Video Framestores: convert your Archimedes into a high performance image processing and analysis systemfrom £1990.00
- ADC1208 range of analogue to digital converters: data acquisition tools for a variety of scientific applicationsfrom £560.00
- Chroma 250/350 enhanced performance genlock cards£395.00

For more information on any of the above, contact Wild Vision Ltd.

* Excluding the A4 computer.

† Price includes carriage.

†† Early machines may need a genlock header fitting – see your local dealer for details.

** Offers apply only to orders for the above expansion cards placed direct with Wild Vision and at full listed price. Offers expire 22nd October 1993.



WILD VISION Ltd

15 Witney Way, Boldon Business Park
Boldon Colliery, Tyne & Wear NE35 9PE
England.

Tel: 091 519 1455

Fax: 091 519 1929



To the uninitiated, a digitiser is a box or expansion card which allows you to grab images from a video camera (or from source) then view them on your computer screen as still images.

What happens next depends on a dash of creativity plus a fair helping of technique. Taking your saved digitised images for a walk (or run) through the exciting software available for the Arc can be a mindblowing experience. So, with the accent on ideas, here are six different electrifying ways to explore your digitiser's potential.

Digi redo

Digitising allows you to grab images onto your computer screen. Where you find the images and how you manipulate them is limited only by your imagination.

Pete Worrall offers six novel ways to digitise

1 THE RESOURCE IMAGE LIBRARY

Taking an education angle first, the National Curriculum resembles a large, interrelated themepark. DIY digitising for that elusive resource material unavailable in published form, can be extremely rewarding and can enhance the learning process.

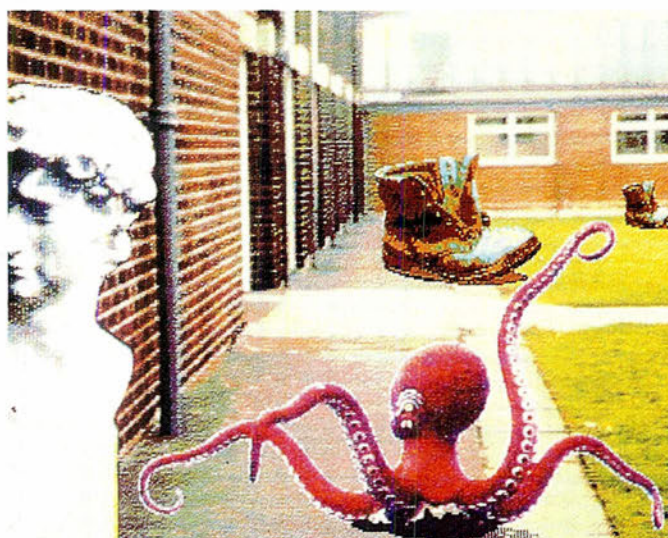
Using a video camera to gather images of bricks, wood, torn paper and so on for a surface (texture) screen took no time at all. The Pineapple Colour Digitiser and Micci software completed the job, placing nine images exactly in a three-by-three format; using the Image Pre-Select size control button you can easily configure different sizes.

This multi-image demo-surface disc was used as complementary material to introduce a topic in the classroom, using

the computer as an electronic blackboard. Any sprite can be viewed from the desktop, with a quick double-click on the file.

Discs containing contrasting or complementary images can be based on a range of topics such as the local environment, emotions, masks, seasons of the year, lettering styles, looking closely, symmetry, structure, transport, food, city, costume, colour, pattern; the list of images you can gather and then use in your work is endless.

All you have to do is get on your bike and gather the pics. The digitiser in this case is used to generate relevant, up-to-date images; this enhances conceptual development in the classroom. The great thing is that the pupils use their imagination in both gathering the images and in using them.



An everyday scene transformed: image manipulation before and after

2 VIRTUAL SCULPTURE

Image manipulation is a strength of most computer systems. You can move trees, buildings, even people, to form an electronic collage. One of my favourite projects is to create a virtual sculpture: creating a sculpture garden in the school grounds for instance. Armed with the Canon Ion video-still camera, which takes 50 pictures on one £5 disc, I chose this quadrangle shot because of the strong perspective. Then I collected my sculptures: a bust, a boot and a red octopus. I digitised the images and saved them as 160K screens. Finally, I loaded everything into *ProArtisan* because of the onscreen scaling facilities.

First, eliminate the background around each sculpture

picture, using the circular nib in the Draw menu with a colour not included in the sculpture. Care is required here – try Zoom with the fiddly bits. Next, cut out the sculpture in the Sprite menu using Grab Sprite with the background colour selected in the Key



Colour option, then save the cut-out Sprite.

Load the background followed by the sculpture and position using the Scale Sprite option. Your results can be positioned, scaled and repeated *in situ*.



The texture images are gathered then arrayed in three-by-three format

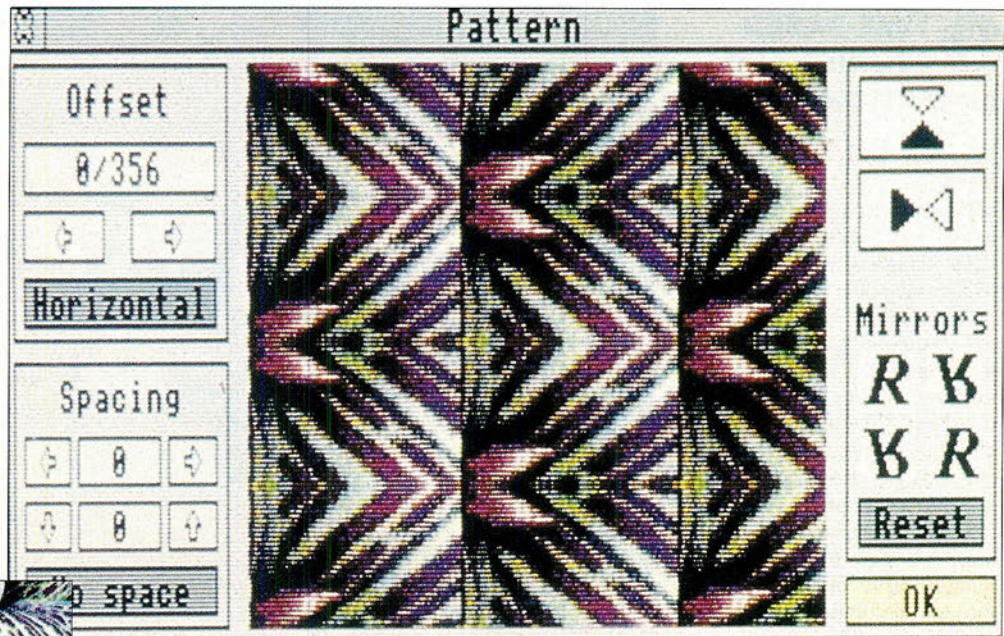
3 SIMPLE TEXTILE DESIGNING

This technique is so easy I'm surprised that so few people have tried it.

First create a Leaf Resource Disc, gathering images from gardens and parks. Close-ups like the one below are preferable, showing different vein patterns, colours and shapes.

Process through the Digitiser, creating one screen containing 16 images. It's a good idea to save a couple of whole-screen shots as well.

This time I used a whole screen image (shot with the Canon ION camera set on



The leaf provides the pattern for a convincing and original textile design

Macro mode) chosen for the distinctive markings and rich colour, but for school use it is advisable to use the multi-screen leaves, to offer a greater choice. I used Pattern Generator on Longman Logotron's art and design soft-

ware *Revelation Image-Pro* to repeat a section of the digitised image.

Using the scissor tool to carefully cut out a small area, the fun really starts in the pattern window with its comprehensive range of tiling options.

There is so much choice here that it is worth saving several versions. Select OK,

create a new screen and use the Paint roller on Motif tiled to see your William Morris fabric design in its full splendour.

To set the mood for your Autumn collection there is a comprehensive colour mixing desk in form of the Colour Shift controls. This will allow you to make those subtle colour changes.

4 CEZANNE IN THE BLACK COUNTRY

Getting your head around the power and potential of computer technology can be difficult, but the bottom line must be let's give it a go and see if it works or not.

In this case I explored the notion of applying a new palette, similar to that of Impressionist painter Paul Cezanne, over a dramatic and stark image of England's Black Country, taken using the Watford Black and White Video Digitiser.

Using *Pro Artisan*, the 16-greyscale palette of the digitised picture can easily be changed by using the pop-up fill menu and redesigning the colour sets 20 to 23; these can also be saved on



What Cezanne might have come up with if he had been painting in Dudley in the late twentieth century

the Disc Menu in the Multi-File section for later use.

Alternatively, use the Magic Pen on the Draw menu, carefully selecting the greyscales one-by-one and substituting them with your own 'designer' colourset. Again you are able to save these.

Finally, using the Tool menu, the Tone, and the Magic Pen function you can repaint the image using your new colour palette.

The resultant image is seen on the left here, producing a striking, and strikingly different take on the original bleak landscape. Play around with different combinations of colours until you find the most pleasing image.

5 TIME-BASED STUDIES AND ANIMATION

This new area is my current favourite. Activities responding to a video camera, linked to a digitiser relaying a 'live' image to the screen can be unpredictable and exciting.

See yourself on telly, then try changing your image. In this example, Tina decided to explore a Jekyll and Hyde transformation by slowly disguising Dawn using cardboard cut-outs, coloured material and a variety of props.

Using the Canon Ion Camera, each stage of the transformation was recorded and saved through the digitiser as a quar-



A mix of props, masks and digitising works a subtle transformation

ter screen format, 17 in all. For this type of activity, have a set viewpoint by using a tripod for the camera. Each of the screens should be numbered in the correct order.

The software used this time is *Splice*, excellent utility software which will turn the sprite frames into a film. First you

load *Splice* onto the iconbar and increase the size of the film to 640 x 512. Then just select OK and a film window appears.

Load in the images by dragging them into the film window. This 17-frame sequence was saved as one 697K film format file.

6 PROMOTIONAL MATERIAL

Promotional material is the name of the game these days.

A Year 10 Rap Band called Impact, at Willingsworth High School, required a poster for their debut school concert.

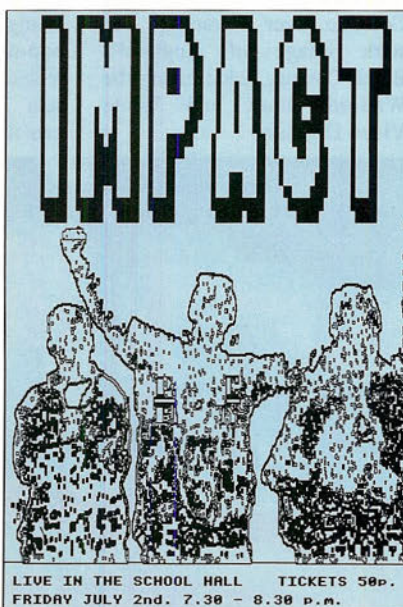
First, I used the Ion camera to take ten promo pictures, then saved them onto disc. The band wanted something different to attract attention, something 'hard edged with street cred,' I was instructed.

The original colour image was processed using Longman Logotron *Revelation 2*'s Edge

Effects menu, using the Trace option; this gave a pixelated black-and-white abstract image. The strong graphics were chosen from the 26 on *ProArtisan* and saved as a sprite. Using *Revelation 2*, an A4 page, 20 x 27cms was created. Into this I dropped the *ProArtisan* graphics and the main image of the band, using Zoom, to see the whole layout.

The time, date and so on was completed using System Font on *Revelation 2*'s text facility. The black-and-white poster was printed on an Integrex printer, then photocopied onto coloured card.

Digitisers also have an important role in desktop-publishing the school newspaper. As a newshound, collecting



relevant visual material and being in the right place at the right time is the key to success. The best equipment to have on hand for this is a small camcorder or the smaller Canon Ion camera. Remember that

news is often spontaneous so it's a good idea to bolt the camera to your body for the day. Whether your digitiser is low or high cost, it remains a powerful tool.

Producing a near-photographic reality image is one of the few things it isn't capable of doing yet... at least not until screen technology has developed a little further.

Product details

Hardware - 2Mb A3000

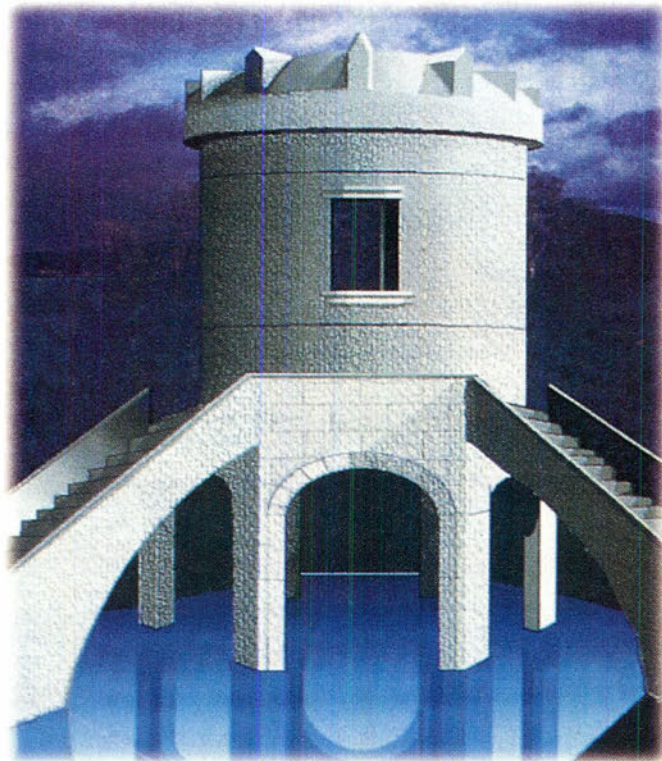
Pineapple Colour Digitiser
Panasonic Video camera
Canon Ion camera

Revelation Image Pro and
Revelation 2
Longman Tel: (0223) 425558
ProArtisan
Clares Tel: (0606) 48511
Splice
OakSolutions Tel: (0274) 620423





TOWERING ABOVE THE REST



Up to 50% Discount



Don't take our word for it see the reviews and previews – ProArtisan 2 has been completely rewritten. And just to show how good we think it is we are making you a special offer until 31st December 1993. Send us your program disk from **Artisan**, **Artisan 2** or **ProArtisan** with a cheque for £67.50 and we will send you a full **ProArtisan 2** pack – that's a full **50% trade in allowance** as a thank you for supporting Clares in the past.

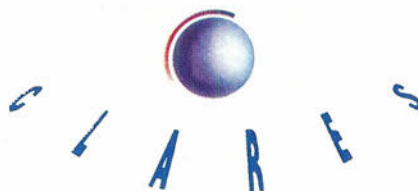


We haven't forgotten the rest of you who have not bought a Clares art package in the past. We are also offering you a special discount price of £87.50 if you return your program disc from one of the following:

Atelier, KidPix, 1st Paint, PrimeArt, Painter Plus, Imagine, Imagery, Photopia, Revelation, Revelation 2, Revelation Image Pro, or any other purchased art package costing over £35.



If you don't want to trade a package in then ProArtisan is still a bargain at just £135 inc V.A.T. Send off your cheque today or ring us with your credit card NOW on 0606 48511



Watford Electronics Ltd

Jessa Group of Companies – Established 1972

Mail Order & Showroom: Jessa House, Finway, off Dallow Road, Luton, LU1 1TR, England.

Tel: 0582 48 77 77 Tlx: 8956095 WATFRD Fax: 0582 488 588

Showroom Only: Jessa House, 250 Lower High Street, Watford WD1 2AN, England.

Tel: 0923 237774 Fax: 0923 233642

Shop Hours: 9am to 6pm (Mon – Sat) Thursday 9am to 8pm. FREE customer car park.

All prices exclusive of VAT; subject to change without notice & available on request.



The Sign of
Quality



The Choice
of Experience

Archimedes micro

System	Basic	Colour	Multiscan
A3010-Action Pack	£339	£539	£589
A3010-2Mb L/C	–	£637	–
A3020-2Mb FD	–	£675	£725
A3020-2Mb HD60	–	£825	£875
A4000-2Mb HD80	–	£850	£900
A4000-Home Office	–	£935	£985
A4000 + 1Mb 386 PC Card	£1075	£1118	
A4000 + 4Mb 486 PC Card	£1275	£1317	
A5000 L/Curve 2Mb HD80	–	£1275	
A5000-L/Curve 2Mb HD80	–	£1318	
A5000-4Mb HD162	–	£1445	
A5000 L/Curve 4 Mb HD162	–	£1488	
A5000 Home Office 4M HD162	–	£1521	
Pocket Book	£212	–	–
Pocket Book Class	£2127	–	–
A4 Notebook – 2M RAM	–	£1399	
A4 Notebook – 4M RAM/60M HD	–	£1699	

Acorn JP150 Ink Jet Printer **£175**
• Cut Sheet Feeder **£59** • Ink Cartridge **£14**

Archi Accessories

• 5.25" 800K External Floppy Drive	£85
• 5.25" 1.2Mb External Floppy Drive	£89
• Acorn I/O Podule (Analogue/User/1MHz bus)	£79
• I/O Podule (Analogue/User)	£59
• MEMC 1A Upgrade	£29
• MIDI add-on to Acorn I/O Podule	£27
• MIDI Expansion Card	£65
• Archi replacement mouse – New design	£29
• PC Emulator	£95
• Floating Point Unit	£455
• Keyboard Extension Lead	£6
• 4 Podule Backplane	£25
• Fan for above backplane	£10
• Risc Os Extras Software Disc	£5
• SCSI Card 8 bit	£129
• SCSI Card 16 bit	£149
• SID Utilities Discs – Set of 4	£19
• ST506 Hard Disc Controller Card	£99
• A5000 Dust Cover	£9
• A5000 Technical Reference Manual	£65
• A4 Spare Batteries	£49
• IDE ROM Upgrade for use with RISC OS3	£16
• Scanlight 256	£188
• Scanlight Junior	£180
• Scanlight II A4	£275
• Scanlight II Sheet Feeder	£139
• Scanlight Professional	£549
• CC Faxpack	£255
• Colour Card	£222
• Wild Vision Chroma Genlock	£189
• Wild Vision Chroma 250	£338
• Wild Vision Chroma 350	£339
• Hawk V9 Mk 2 Standard	£179
• Hawk V9 Mk 2 Dithered	£245
• Pace Microlin Pocket Fax/Modem	£175
• Spectra Colour Handscanner	£539



Watford Electronics Headquarters – Luton

Scan256 Grey Scale Scanning

If you need a 256 grey-scale hand scanner for your Archimedes then look no further.

Scan256 gives you up to 256 levels of grey at a maximum of 400dpi and is supported by state-of-the-art sophisticated software – **for only £159**. This makes it the only sensible scanning and image processing solution for the Acorn 32-bit range. Just compare these features:

- More than one copy of the image held in memory at once.
- Allows multiple consecutive operations without saving the original to disk.
- Highly advanced dithering and image size reduction.
- Convolution digital filtering with over 100 filters gives high quality images from poor quality scans.
- Adjustable scale and size during scan.
- Supports State Machine G8 Graphics Card.
- Includes shearing and rotation.
- Saves images in industry standard formats: TIFF, Sprite and AIM.
- True brightness, contrast and gamma correction.
- Multiple options – scale to page, centre sideways selected area.
- Selectable scanning modes.
- Plus much much more...

Please specify Archimedes type, not compatible with A3000/4000.

Scan256 for A3000 Micro **£159**
Scan256 for A3000 Micro **£169**

RISC OS 3.1 Upgrades

- A5000 Software Upgrade Kit **£26**
- Software Upgrade Kit for the rest **£40**
- Hardware Upgrade Kit 300/440 **£26**
- Bulk (10) Software Upgrade Kit **£329**

Archimedes RAM Upgrades

All our memory upgrades are simple to fit. No soldering required. Fitting instructions supplied.

- R300-4 layer RAM upgraded board (Bare) **£25**
- R302-A3000 – to 2Mb RAM Upgrade **£29**
- R303-A3000 – to 2Mb RAM Upgrade (expandable to 4Mb) **£49**
- R304-A3000 – to 4Mb RAM Upgrade **£99**
- R305-A3010 – to 2Mb RAM Upgrade **£39**
- R306-A3020/A4000 – to 4Mb RAM Upgrade **£70**
- R311-A305 – to 1Mb RAM Upgrade **£30**
- R312-A305/310 – to 2Mb RAM Upgrade **£85**
- R412-A410/1 – to 2Mb RAM Upgrade **£25**
- R413-A420/1 – to 4Mb RAM Upgrade **£50**
- R414-A410/1 – to 4Mb RAM Upgrade **£75**
- R810-A410/1 – to 8Mb RAM Upgrade **£32**
- R820-A420/1 – to 8Mb RAM Upgrade **£299**
- R840-A440/1 – to 8Mb RAM Upgrade **£239**
- A5000 – 2Mb to 4Mb additional RAM **£82**

Hi-Speed, Low Cost Archi Hard Disc Drive

Hardware

- Supports proposed ANSI ATA (IDE) specification
- Fast 16 bit MEMC interface interrupt driven to support background disc operations
- 5 Mbytes per second peak transfer rate
- Up to two drives (master and slave) per card
- Multiple cards per machine (up to four)

Software

- All software supplied in ROM
- Filing system 'IDEFS'
- Desktop filer with drive ready detection and disc name under icon
- IIDEForm, WIMP based configuration and formatting software
- Drives can be individually write protected
- Power saving standby modes supported with configuration timeout
- Drives can be used without translation in native mode for minimum overhead
- IIDEFSdisk, creates PC emulator hard disks.
- Password protection available

A300/A400 Internal Drive

Part No.	Capacity	Access Speed	Price
ADA 0520	44Mb	28mS	£159
ADA 0550	80Mb	17mS	£195
ADA 0530	105Mb	16mS	£235
ADA 0570	210Mb	15mS	£359
ADA 0880	330Mb	15mS	£465

All above 3.5" Drives are supplied complete with Controller Card & cable for use with A300/A400 /A500 series machines.

AAA 0300 External Case & PSU for A3000 **£85**
AEA 1060 Archi IDE Hard Disk Podule only **£89**

A5000 Internal IDE Drive

Can be used as 2nd Internal IDE Drive

ADA 1030	80Mb	17mS	£149
ADA 0940	105Mb	16mS	£189
ADA 0950	210Mb	15mS	£259
ADA 0580	330Mb	15mS	£399

A3000 External IDE Drives

ADA 0780	44Mb	28mS	£225
ADA 1020	80Mb	17mS	£265
ADA 1050	105Mb	15mS	£309
ADA 1070	210Mb	15mS	£399

New IDE ROM Software for RICS OS 3 (upgrade) for existing users **£16**

Internal Hard Disc Drives for A3000/A3010

State of the art, 4 layer internal IDE Hard Cards for the A3000. Software supplied in On-board ROM.

ADA 0770	30Mb	19mS	£159
ADA 0750	60Mb	18mS	£199
ADA 0720	80Mb	18mS	£219
ADA 0730	120Mb	16mS	£285

Supplied ready assembled. No soldering required. Simply plug into the allotted space.

Archi IDE Hard Cards

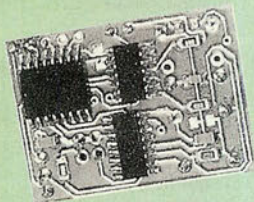
Ready to install, high performance hard cards for A300 & A400 series.

ADA 0800	30Mb	19mS	£189
ADA 0890	60Mb	19mS	£229
ADA 0670	80Mb	18mS	£249
ADA 0680	120Mb	16mS	£295

Acorn Multimedia

- Multimedia Expansion £485
- Multimedia Expansion + 16 bit SCSI £585

VIDC Enhancer

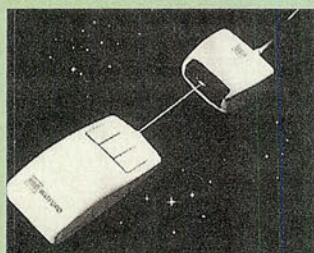


Our two unique VIDC add-on boards for the Archimedes cater for all VGA and Multiscan monitors and screen modes. The multimode software supplied provides all the new modes for the selected monitor type, including the now standard Computer Concepts modes. With VGA monitor, you are no longer restricted to a few modes. A Desk Top application supplied in disc, allows new modes to be designed and existing modes to be modified for particular monitors.

Super VGA VIDC Card: Its unique design allows the horizontal and vertical sync to be buffered and have the polarity changed under software control. **£35**

MultiVideo VIDC Card: As above, but for MultiScan monitors only. **£19**

Archi Cordless Mouse



Features:

- Infra Red Signal Transmission
- High Resolution 200 DPI
- High Tracking Speed of 600mm/s up
- Anti-static Silicon Rubber Coated Ball
- Low Friction Teflon Footpads
- Power - by two AAA size batteries (not included)
- Automatic Standby Mode after 5 minutes inactive
- Auto Power Shut-Down after 20 minutes inactive

Price: £29

Archi A4 Scanner



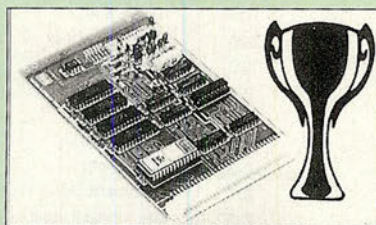
The 216mm scanning width can cope with both desktop scanning of single sheets, photographs, diagrams, etc with its fast ten page automatic document feeder, but it can also detach from the feeder to become a convenient hand-held full page scanner for larger documents or pictures. Scanned image control can be freely adjusted in increments of 10 dots per inch from 100 up to 400 dpi resolution with 64 levels of grey scaling. A built in shading controller and manual brightness control achieve optimum clarity. Unlike some scanners, which use a red light source, the Watford scanner uses a yellow/green source which vastly improves the light/dark contrasts, thus eliminating the effect where any red-based colours are faded down to white and so do not show up in the scanned image.

Archi A4 Scanner	£199
Sheet Feeder for Above	£75
Scanner + Sheet Feeder	£269

Spares for Archimedes

Archi Keyboard	£29	Cased Keyboard	£120
Controller VIDC	£39	A3000 Keyboard	£45
I/O Controller	£39	ARM 2 CPU	£39
A400 Floppy Drive	£59	Fan Filter	£6
A3000 Floppy Drive	£59	Keystrip	£5
A300/400 PSU	£89	MEMC	£29
A3000 PSU	£49		

Archi Real-Time Digitiser



Now supplied with NEW RISC OSVersion Software

Watford's Archimedes Video Digitiser is the most sophisticated digitiser ever designed for a micro. It provides a fast and flexible means of capturing images from a video camera or recorder for display and manipulation on the Archimedes range of Micros. Off-air televisions may also be digitised via a video recorder or TV tuner. Please write for further details.

Price £75

A Set of Colour Filters for colour image grabbing using a video camera **£16**

Archi to BBC Serial Link Mk 2

Using this simple data link, it is possible to solve all your BBC to Archimedes data transfer problems. The kit is supplied with a disk, and the necessary cable to connect the two computers.

- RISC OS 2 Version **£15**
 - RISC OS 3 Version **£16**
- (P.S. For A3000 Serial Upgrade (£19) required)

A3000 Accessories

- 3.5" External Drive **£95**
- Technical Manual **£32**
- A3000 Dust Cover **£5**
- Acorn Carrying Case for A3000 **£10**
- A3000 User Port/Midi Upgrade Card **£44**
- A3000 User/Analogue/IIC I/O Card **£38**
- A3000 External Podule Case **£15**
- Monitor Stand **£15**
- Serial Upgrade **£19**
- Micro + Monitor cover **£9**

A3000 I/O Card (User, Analogue & IIC)

This NEW versatile I/O Card from Watford, fits inside the A3000 and includes an Analogue to Digital Converter, a User Port, and an InterIC (IIC) connector.

The card allows many of the peripherals developed for the BBC to be used with the Archimedes A3000. The ADC and User Port have the same pin out and connectors as the BBC computers.

Extensive RISC OS software is supplied to provide BBC OSBYTE calls for support of the ADC and User Ports, including the BASIC keyword ADVAL. The software provides extended RISC OS support for separate interrupts from both the ADC and User Ports, permitting easy interrupt driven operation.

The card is provided with all the software in ROM and is automatically loaded when the machine is turned on.

Peripherals connected to the ports can obtain up to 500mA of power at +5V. A fuse is fitted to the card to protect the A3000 from damage arising from accidental short circuit of the power output.

Features

- An 8 bit User Port with a standard 20 way IDC connector, compatible with the User Port on the BBC computers and the Archimedes I/O Podule.
- A 10 bit Analogue to Digital Converter with a standard 15 way D-type connector, compatible with the ADC on the BBC range of computers and the Archimedes I/O Podule.
- An InterIC (IIC) Port with a 5 pin DIN socket to connect the A3000 to external IIC devices **£38**

Cortian CKAI Interface

Eliminates need to have a User Port in A3000/305/310/400/540 when using Concept Keyboard **£28**

Concept Keyboards

- A4 Standard Pack **£89**
- A3 Standard Pack **£94**
- Designer Pack A4 **£104**
- Universal 2010 Keyboard A3 **£107**
- Universal 2010 Keyboard A4 **£104**
- Primary Pack **£95**
- Primary Pack **£99**
- A3 D Pack **£104**

NEW

SPECIAL FINANCE DEAL

Now everyone can afford an Archimedes micro, monitor, printer, Hard Drives, etc with Watford Electronics at 12, 24 & 36 months credit facility. Please telephone 0582 74 55 55 for details

Archimedes External Disc Drive Interface

With this interface it is possible to connect almost any 5.25"/3.5" disc drive with its own power supply to the Archimedes. Up to 4 disc drives can be connected. Fully Buffered Board. NO SOLDERING is involved. Supplied complete with necessary lead.

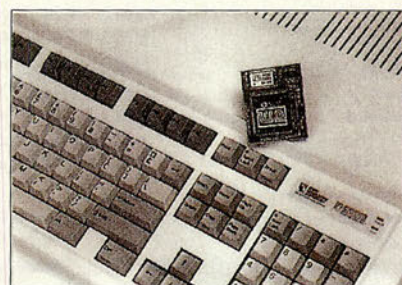
Price £21

Back Plate Extension

- A300/400 **£15**
- A3000 **£14**

ARM 3 Turbo Card Mk II

Simply The Best



Here it is at last - the all new Mark 2 version of Watford's highly acclaimed ARM 3 processor board for the Archimedes and now also the A3000 series computers. Using the latest surface mount technology on a high quality four layer circuit board we have reduced the overall size to a mere 53mm x 45mm, and the cost to only £145. Mk II upgrade will increase the speed of your micro by a factor of 3 to 6. Any competent A300 or A400/1 series micro owner can fit the upgrade himself, as we provide full fitting instructions and a special ARM chip extraction tool. However, for A3000 micros and those not wishing to perform the upgrade themselves, we will collect, upgrade and return your micro by courier service, at an additional cost of £24. (A300 and old A440 series owners please note - you will need to upgrade to MEMC1A for ARM3 to work.)

RRP £249

Special Offer £125

Network Accessories/Software

BBC B Econet Kit	£42
Master Econet Module	£40
Archimedes Econet Module	£40
A3020/4000 Econet Module	£49
Acorn A4 Econet Module	£50
Archimedes Ethernet Card	£139
A3020/4000 Ethernet Card	£179
AUN/Level 4 Fileserver	£379
Econet Starter Kit	£137
100m Econet Cable	£99
Econet Socket Box	£7.50

(P.S. Full range of Network Accessories /Software/Site Licences available. Telephone for details.)

Leasing finance at very attractive rates now available to Businesses (subject to status), Schools, Colleges, Universities, Government Depts. and Local Councils.

Continued → → → →

Archimedes Software

10 out of 10 Early Essentials	£18
10 out of 10 English (Ed)	£18
10 out of 10 Maths (Ed)	£18
3D Construction Kit (Ed)	£25

Acorn DTP (Dn)	£49
Arcorn Advance	£88
Air Supremacy (Ga)	£15
Ancestry (M)	£58
Animated Alphabet (Ed)	£21
An Eye for Spelling (Ed)	£31
Arcade 3 Compilation (Ga)	£12
ArcComm 20 0 (M)	£45
ArcLight (Gr)	£40
Arc-PCB (M)	£79
Arc-PCB Pro (M)	£169
Arc-PCB Schematics (M)	£229
ArcTerm (M)	£58
ARCTist (Gr)	£18
ARCTiculate (M)	£18
Arcventure - The Romans	£29
Arcventure - The Egyptians	£29
Arcventure - The Vikings	£29
Armada Sound (M)	£58
Artworks (Gr)	£120
Atelier (Gr)	£60
Artisan 2 (Gr)	£42
Autosketch II (Gr)	£65
Avante Garde Fonts (M)	£23

Basic Compiler (La)	£77
Battle Chess (Ga)	£20
Battletank (Ga)	£9
BBC DFS Reader (M)	£6
Best Four Adventure (Ed)	£34
Best Four Language (Ed)	£34
Best Four Maths (Ed)	£34
Blackangel (Ga)	£23
Bookbinder (Ed)	£43
Bookstore - Primary (Ed)	£35
Bookstore - Secondary (Ed)	£52
Boogie Buggie (Ga)	£14
Break 147 + Superpool (Ga)	£19
Britain since 1930's (Ed)	£26
Broadcast Loader (M)	£65
Bughunter in Space (Ga)	£9
Bumper Disc 1 (Ed)	£14
Bumper Disc 2 (Ed)	£14

CADet (Gr)	£140
Cambridge Pascal (La)	£75
Cataclysm (Ga)	£17
Caverns (Ga)	£10
Chameleon (M)	£32
Champions Compilation	£33
Chart Well (M)	£24
Chatter (M)	£33
Chess 3D (Ga)	£16
Chocks Away Comp (Ga)	£26
Chopper Force (Ga)	£18
Chuck Rock (Ga)	£16
ClipArt Set 1 (Gr)	£27
ClipArt Set 2 (Gr)	£27
Compression (M)	£32
Concept Designer (Ed/Gr)	£22
Converta-Key (Ed)	£9
Craftshop 1 (Gr)	£18
Craftshop 2 (Gr)	£18
Crystal Maze	£34
Cyber Chess (Ga)	£25
Cycloids (Ga)	£20

Data Vision (M)	£66
Data Word (Ed)	£14
Demons Lair (Ga)	£19
Deskeddit 2 (M)	£24
Desktop C Rel.4 (La)	£179
Desktop Folio - Wordprocessor, Desktop & Interactive Publishing	£59

Desktop Office - Database, Graphs & Charts, Wordprocessor, Spreadsheet & Communications	£69
Desktop Stories (Ed)	£35
Desktop Thesaurus	£16
Digisim (Ed)	£35
Dream Time (Ed)	£23
Dungeon	£24

Easiwriter II (Wo)	£114
Easiword (Wo)	£43
Ego Repton 4 (Ga)	£17
Elite (Ga)	£31
Enter the Realm (Ga)	£17
Equasor (M)	£36
E-Type Compendium (Ga)	£17
E-Type Designer (Ga)	£13
Euclid 2 (Gr)	£40
Eureka (Sp)	£95
ExcellonDRILL (M)	£49
Export, Trade & Industry (Ed)	£34
Expression PS (M)	£19

Farm 5-7 years (Ed)	£18
Fervour (Ga)	£18
FilmMAKER (Gr)	£55
First Logo	£23
Fireworkz	£POA
Fleet Street Phantom (Ed)	£23
Flexifile (M)	£69
Fun School 3 Red - up to 6 years (Ed)	£16
Fun School 3 Green - 6-8 years (Ed)	£16
Fun School 3 Blue - over 8 years (Ed)	£16

Galactic Dan (Ga)	£18
GammaPlot (Ga)	£39
Gate Array Teaching System (Ed)	£68
Genesis (M)	£10
Genesis 2 (M)	£99
GerberPLOT (M)	£49
Glimpse Clip Art Utility (Ed)	£8
Gods (Ga)	£18
Graphbox (Gr)	£56
Graphbox Prof. (Gr)	£102
Greivous Bodily Arm (Ga)	£17

Hero Quest (Ga)	£23
Highlighter (Ed)	£30
Holed Out Designer (Ga)	£13
Holed Out Golf Camp (Ga)	£17
Hotlink Presenter (Gr)	£40

Illusionist (Gr)	£68
Impression II DTP (Dn)	£115
Impression Junior (Dn)	£63
Impression Business Supp.	£39
Impression II Borders	£18
Interdictor 2 (Ga)	£23
Investigating Maths (Ed)	£34
Investigator 2 (M)	£20
Iron Lord (Ga)	£13

Jahangir Khan Squash (Ga)	£19
James Pond	£19
Jigsaw (Ed)	£18

Kermit (M)	£46
Kid Pix (Ed)	£34
Knowledge Organiser II	£75

Landmarks Aztec	£19
Landmarks Columbus	£19
Landmarks Egypt	£19
Landmarks Rainforest	£19
Landmarks Victorians	£19
Landmarks World War II	£19
Lemmings (Ga)	£18
Linkword French (Ed)	£32
Linkword German (Ed)	£32
Linkword Spanish (Ed)	£32
Logotron Logo (La)	£45
Lotus Turbo Challenge II (Ga)	£18

Macro Assembler (La)	£44
Mad Prof. Mariarti (Ga)	£14
Maggie 2 (M)	£49
Mahjong Patience (Ga)	£15
Making of the UK (Ed)	£35
Mapping Skills (Ed)	£25
Mapventure (Ed)	£22
Masterbreak (Ga)	£13
Man at Arms (Ga)	£14
Manchester United II (Ga)	£18
Man. United Europe (Ga)	£19
Medieval Realms (Ed)	£35
Microbugs (Ed)	£24
Mogul (Gr)	£17
Money Matters (Ed)	£14
Monotype Fonts (M)	£75
Multistore v2.01 (Dn)	£99

Nature Park Adventure (Ed)	£24
Nebulus (Ga)	£18
Nevryon II (Ga)	£20
Notate (M)	£41
Number in the National Curriculum (Ed)	£34
Numerator (M)	£38
Numerator Chaos	£18

Oh No More Lemmings (Ga)	£14
Omar Sharif's Bridge (Ga)	£18
Ovation DTP (Dn)	£82

Pandoras Box (Ga)	£17
Payroll Manager (M)	£66
PCAD Educ (Gr)	£395
Pendown (Wo)	£46
Pendown Plus (Wo)	£67
Picture Book (Ed)	£14
Pinpoint (Dn)	£64
Pinpoint Junior (Dn)	£23
Pipedream 3 (Wo)	£70
Pipedream 4 (Wo)	£117
Pipe Mania (Ga)	£15
Play It Again Sam (Ga)	£17
Podd (Ed)	£23
Polyglot (M)	£16
Populous (Ga)	£21
Poster (Gr)	£74
PowerROUTER (M)	£125
Presenter GTI (M)	£65
Presenter Story (M)	£145
Primeword (Wo)	£50
Prophet Accounts (M)	£132
Prophet Demo Disc (M)	£10
ProArtisan (Gr)	£69
ProArtisan II	£109
ProCad (Gr)	£390
PrimeArt (Gr)	£46
Pysanki (Ga)	£14

Quark (Ga)	£19
Quazar (Ga)	£10
Quest for Gold (Ga)	£15

Rainforest (M)	£17
Real McCoy 2 (Ga)	£21
Real McCoy 3 (Ga)	£22
Real McCoy 4 (Ga)	£22
Recall (Ed)	£36
Recordz	£POA
Redshift (Ga)	£9
Render Bender 2 (Gr)	£77
Resultz	£105
Return to Doom (Ga)	£16
Repton 3 (Ga)	£18
Revelation 2 (Ga)	£74
Rhapsody 2 (M)	£44
Rhapsody 3 (M)	£78
RiscBasic Compiler (La)	£66
RiscForth Compiler (La)	£66
RoboLogo (La)	£38

Saloon Cars Deluxe (Ga)	£24
S-Base Personal	£79
S-Base Developer	£150
Schema (Sp)	£89
ScoreDraw (M)	£43
Selladore Tales (Ed)	£24
Shareholder Pro (M)	£129
Showpage (Gr)	£127
SigmaPlot (Gr)	£39
Sim City (Ga)	£22
Skyhunter	£22
Sleuth	£45
Snippet (Ed)	£31
SolidCAD (Gr)	£65
SolidsRENDER (Gr)	£65
SolidTOOLS (M)	£169
Space Mission Mada (Ed)	£23
Speech! (M)	£15
Stig of the Dump (Ed)	£22
Stunt Racer 2000 (Ga)	£24
SuperDUMP (M)	£17
Superior Golf (Ga)	£13
SuperPLOT (M)	£17
Swiv (Ga)	£18

Talisman (Ga)	£8
Technodream (Ga)	£19
Time Tabler (M)	£499
Time Traveller (Ed)	£31
Titler (Gr)	£115
Toolkit Plus (M)	£35
Topographer (M)	£62
Touchtype (M)	£35
Tracker (M)	£37
Trivial Pursuit (Ga)	£22
Turbo Driver BJ10e (M)	£41
Tween (Gr)	£23
Twin World (Ga)	£14
Type Studio (M)	£38

UIM (Ga)	£23
Victorians (Ed)	£19
Viewpoints (Ed)	£33
Virtual Golf (Ga)	£24
Vox Box (M)	£45

White Magic 2 (Ga)	£15
Wimp Prog. Toolkit (M)	£16
Wizards Revenge (Ed)	£17
Wordz (Wo)	£85
World Maker (Ed)	£46
World Map Study (Ed)	£59
Worldscape (Ga)	£16
Worst Witch (Ed)	£21

X-Fire (Ga)	£19
Xenon II	£22
Zelanties (Ga)	£14
Zool (Ga)	£18

KEY:	
(Gr)aphics	(Sp)readsheets
(Ga)me	(Da)tabase
(Ed)ucational	(In)tegrated
(M)iscellaneous	Package
(Wo)rdprocessor	(La)nguage

HOW TO ORDER



TELEPHONE
(0582) 48 77 77

Archi Mk II Hand Scanner

Watford's Mk II hand scanner has a maximum resolution of 400dpi. The scanning width is 4". The sophisticated software is supplied in a 64K ROM, located on a standard single width expansion module. As you scan a page, the image appears in the scanning window on the screen, scrolling up in real time. Other facilities include cropping and scaling to any size including stretching and squashing in X and Y directions separately. Colour tinting, X and Y flip, edge detection which turns solid objects into outlines. Images can be printed on any printer supported by RISC OS. On-screen help is provided via the RISC OS interactive help facility. (Please write in for full technical details).

AHS-4 Archi 300/400 Version £89
AHS-3 Archi A3000 Version £99

Quest - Tracer ball

An attractively finished, extremely reliable mouse replacement, input device. Requires very little desk space. Connects directly to your BBC B, BBC Master or Archimedes Micro.



QT-10 BBC/Master Version £25
QT-20 Archimedes Version £26

Antistatic Lockable Disc Storage Units

- **M35** - holds up to 50 5.25" discs £4.95
- **M85** - holds up to 95 5.25" discs £6.95
- **M25*** - holds up to 25 3.5" discs £4.95
- **M50** - holds up to 50 3.5" discs £6.50
- **M100** - holds 100 3.5" discs £6.99

*Not lockable

Disc Plonker Rack

When using ones micro, there is a tendency to have more than one disc on the desk. This exposes them to the hazards of fingerprints, scratches, dust, coffee and an untidy desk. Why not protect your valuable data from all these hazards with the help of our extremely handy and low cost DISC PLONKER RACK. Holds up to eight 5.25" discs.



£2

3M - Diskettes

Lifetime warranty on 3M Discs

- 10 x 5.25" S/S D/D 40T (744) £5
- 10 x 5.25" D/S D/D 40T (745) £5
- 10 x 5.25" S/S D/D 80 Track (746) £6
- 10 x 5.25" D/S D/D 80 Track (747) £7
- 10 x 5.25" 1.6M D/S H/D for IBM £8
- 10 x 3.5" S/S D/D 40/80 Track £6
- 10 x 3.5" D/S D/D 40/80 Track £6
- 10 x 3.5" D/S H/Density £10

Top Quality Diskettes

Watford's lifetime guaranteed discs are supplied complete with self stick labels & plastic library case.

- 10 x **M3** 3.5" D/S D/D 80 Track £6
- 10 x **M9** 3.5" D/S High Density £10
- 10 x **M4** 5.25" S/S D/D 40 Track £5
- 10 x **M5** 5.25" D/S D/D 40 Track £5
- 10 x **M7** 5.25" D/S D/D 80 Track £6
- 10 x **M8** 5.25" D/S H/D Hi-Density £9

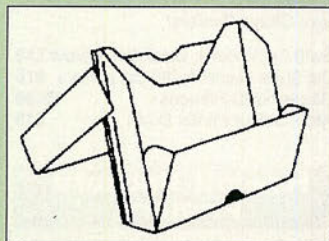
Disk Drives in Monitor Stand



- **CDPM 800S** - Twin 5.25", 800K Double sided 40/80 track switchable disc drives mounted in an attractively finished Beige colour plinth for the BBC B & Master 128K micros. Supplied complete with integral power supply, cables and Utilities disc. The mains switch with neon On/Off light indicator, and the two 40/80 track switches are mounted on the front panel for ease of use. £139

- **DP35 800** - Same as above except one disc drive is a 5.25" and the other is 3.5". £135

Plastic Library Cases



- DLC1** - holds 5 x 3.5" Discs £1.50
- DLC2** - holds 10 x 3.5" Discs £1.90
- DLC3** - holds 5 x 5.25" Discs £1.60
- DLC4** - holds 10 x 5.25" Discs £2.00

Disc Albums

Attractively finished in leather-look PVC Vinyl

- DW1** - holds 6 x 3.5" Discs £2.50
- DW2** - holds 6 x 5.25" Discs £3.00
- DW3** - holds 20 x 5.25" Discs £3.50
- DW4** - holds 40 x 3.5" or 5.25" Discs £4.50

Cleaning Kits & Aerosols

- 5.25" Disc Cleaning Kit £4
- 3.5" Disc Cleaning Kit £4
- PC Cleaning Kit £7
- Professional PC Cleaning Kit £12
- Aerosol Dust Spray Can £3
- Servisol Foam Cleaner Can £3
- Antistatic Aerosol Spray £3

Watford's Mk II 1772

Single/Double Density DFS

Many of our customers have wanted to use our superior DDFS and Acorn ADFS together. Now our Mk II DDFS Board with its 1772 Disc Controller has been adapted to allow the use of Acorn ADFS as well. It also has all the commands of the Acorn's 1772 DFS, plus many more added features.

- Complete Kit **Special Price £39**
- DDFS Manual (No VAT) £6.95

Assorted ROMs BBC B/Master

- ACORN ADFS £25
- ACORN BASIC 2 plus User Guide £22
- ACORN DNFS £17
- Acorn OS B+ £25
- Acorn OS 1.2 £14
- Beebmon £22
- Dump Out 3 £25
- Graphics Extension Rom £21
- GXR-B £22
- GXR-B+ £43
- Logotron LOGO £38
- MASTER OS ROM £15
- Master ULA (47) £10
- Master ULA (60) £69
- Numerator - Archi £39
- Numerator - BBC £32
- Pendown ROM £13
- SERIAL ULA £15
- TED £14
- Video ULA £39
- 1Mb OS ROM £36
- View 3.0 £45
- Viewsheet £36
- Viewspell 80T £25
- InterBase £49
- InterChart £25
- InterSheet £37
- InterWord £36
- Mega-3 ROM £42
- Wordwise Plus £38
- # Price includes a FREE Wordaid Rom View £29
- Printer Driver ROM £29
- Word-Aid £24

BBC Micro Products

- Quest Mouse III & Quest Paint £39
- Quest Mouse III, Quest paint, AMX Stop Press & Pagefont £59
- Quest Mouse III only £25
- Quest Paint only £23
- Quest Font Disc (22 fonts) £15
- Red Mouse Mat £3
- Green Mouse Mat £3
- Blue Mouse Mat £3
- Conquest-Quest Extensions £24
- Quest Colour Dump Disc for Integrex 132 £18
- AMX Mouse & Superart £39
- AMX Mouse only £25
- AMX Superart £25
- AMX Stop Press DTP £18
- Page Fonts (20 fonts) £13
- Wapping Editor DTP £39
- Wapping Editor & Quest Mouse £59
- Wapping Art Disc (Clip Art) £15
- Wapping Font Disc 1 £12
- Wapping Disc 2 £13
- 32K Shadow Ram Expansion Card £45
- 32K Memory Expansion for the BBC Micro £9
- BBC Master Twin Rom Cartridge £14
- BBC Master Quad Rom Cartridge £39
- 64K ROM/RAM Card for BBC/B £52
- 128K ROM/RAM Card for BBC/B £83
- 16K Static Ram for ROM/RAM £8
- 16K Dynamic Ram for ROM/RAM £13
- Battery Backup for ROM/RAM £3
- Sideways ZIF External ROM Socket £18
- Solderless Rom Board £32
- Solderless Rom Board Utility Disc £8
- Data Duck - Plug 2 Disc Drives into BBC £14
- Power Duck - Power 2 Drives from BBC £8

Acorn & Watford DFSs

- Watford DFS Kit complete £42.00
- DFS Manual (comprehensive) £6.95
- Acorn DNFS ROM £17.00
- Acorn ADFS ROM only £25.00
- Acorn 1772 DFS ROM Kit £42.00
- Acorn DFS Kit complete £42.00

TEX EPROM ERASERS

TEX Eraser operates following the manufacturers specifications to give maximum possible working life to EPROMs by not erasing too fast. Erases up to 10 EPROMs. Has an automatic safety cut-off to switch off UV lamp when opened.

£34

- Spare UV Lamp £12

Microvitec Monitors

- **1451** - Medium Resolution #£199
- **Cub3000** Medium Res for A3000 #£195
- Dust Cover for Microvitecs £5.50
- **Touchtec 501 Touch Screen** £239
- **Touchtec 3000** (For RiscOs 2 only) £POA
- **CubScan 1440 14"** £389
- **CubScan 1450 15" FST** £POA

#3 years parts & labour warranty

MultiScan Monitors

- Eizo T240i £483
- Eizo F340i-W £625
- Eizo F550i-W £899
- Phil 7CM5279 £269
- NEC 2A-N £274
- NEC 3FG £360
- NEC 3FGe £449
- NEC 4FGe £479
- NEC 5FG £899
- NEC 5FGe £789
- Pan TX1713MAB £616
- Phil 4CM4270 £289
- Phil 7CM3279 £249
- Taxan 787 £229
- Taxan 787LR £239
- Taxan 789LR £289
- Taxan 795-PC £465
- Taxan 875-LR £737
- Panasonic C1381 £199

Panasonic monitors carry 2 years on-site maintenance warranty.

Aries Monitors

Its multiscan circuitry provides automatic adjustment for frequencies between 31 and 56KHz horizontal, and 43 and 70KHz vertical. Its 0.28mm dot pitch high resolution tube provides super sharp text graphics, while a high speed (70/72 Hz) refresh rate provides a flicker-free display easing the eye strain. The VIDC Adaptor supplied with the monitor allows high resolution operation in all screen modes.

£299

- **Aries Alphascan 17" Plus** £585
- **Aries 6000 15" Flat Screen**, 0.28mm non-glare 1024 x 768 non-interlaced (70Hz) Microprocessor controlled £395
- **Aries 7000 17" Flat Screen**, 0.28mm non-glare. Maximum resolution 1280 x 1024 non-interlaced. Microprocessor controlled £625

Philips Monitors

- **BM7502** 12" Hi-res Green £88
- **CM8833ii** 14" med. res Colour. Ideal for BBC B; Master & Archimedes £192
- Dust Cover for Philips Monitors £6
- Spare Monitor Leads (various) £7

Credit Card

Hotline

0582 745555

Continued → →

Pace External Modems

All Pace modems are BABT Approved and include a 5-year Parts & Labour Warranty.

- Linnet Plus – Intelligent, V21/23 Auto Dial/Answer, Hayes Compatible **£89**
- Linnet 24 – Intelligent, V21/23, V22, V22bis, Auto Dial/Answer, Hayes Compatible **£142**
- Linnet Quad – Intelligent, V21/23, V22, V22bis, V42, MNP 4&5 Auto, Dial/Answer, Hayes Compatible **£175**
- Linnet 32 – V32, V22bis, V42bis, V42, MNP 4&5 **£249**
- Linnet 32+ – V32bis, V32, V22bis, V22, V32, V21, V42bis, V42, MNP 4&5 **£299**
- Ultralink Quad – V22bis, V22, V21, V23, V42bis, V42, MNP 4&5 Upgradable to Ultralink 32 Plus Spec. **£199**
- Ultralink 32+ – Intelligent, V32bis, V32, V22bis, V22, V21, V23, V42bis, V42, MNP 4&5 wire leased line with P.S.T.N. dial backup and auto restore **£429**

Archi Comm Software

- Hearsay **£69**
- Arc Comm **£45**
- RS-232 Cable for above modems **£9**

Integrex InkJet Printers

- Paper Roll for Integrex 132 **£6.50**
- BBC Screen Dump Software **£10**
- Colour Cartridge **£23**
- Black Cartridge **£14**
- 100 A4 OHP transparencies **£55**
- Colour Jet 2000 **£599**
- Betajet Ink Jet Printer **£185**
- Betajet Cut Sheet Feeder **£43**
- Integrex Colourjet Series 2 **£335**
- Auto Sheet Feeder for Series 2 **£45**

Printer Leads

- BBC Centronics 4' **£5**; 6' **£6**
- Archi Parallel 2m **£5**; 5m **£9**; 10m **£13**
- PC Parallel 2m **£5**; 5m **£9**; 10m **£13**
- 25 pin D Male/Male 2m **£5**; 5m **£10**
- Centronics Double Ended 4' **£5**; 6' **£6**
- RS232 Leads Various 5m **£10**; 10m **£14**
- RS232 Leads Various **£POA**

Star Printers

	Printer	CSF	Ribbon
LC15	£186	£135	£5
LC20	£102	£60	£4
LC100C	£117	£65	£9
LC24-15	£242	£135	£5
LC24-100	£142	£69	£5
LC24-20 Mk2	£170	£65	£5
LC24-200C	£205	£65	£12
LC200 C	£151	£65	£12
Star Jet SJ48	£169	£43	£16
SJ144C	£399	–	–
XB24-200C	£322	£80	£12
XB24-250C	£389	£139	£12
ZA-200C	£258	£89	£12
ZA-250C	£324	£139	£12

Includes 12 months on-site warranty

- Black Ribbons for Colour Printers **£5**
- Serial 8K I'face LC10/15/24/200 **£52**
- 32K Buffer LC/XB24-10; 15; 200 **£52**
- Star/Archi Colour Printer Driver **£15**

NEC Printers

	Printer	CSF	Ribbon
P22Q	£190	£59	£6
P32	£255	£59	£6
P62	£339	£79	£8
P72	£395	£115	£8
P90	£577	£115	£8

- Jetmate J400 **£169**; • Jetmate J800 **£249**
- Black Ribbons P20; P32 **£6**
- Ribbons P60/70/P90 Black **£8**; Colr **£14**
- P60/70 Colour Option Kit **£59**
- CSF for P20 **£59**; P60 **£89**; P70 **£89**

Laser Printers

All Laser Printers (excluding HP Lasers) include 12 months on-site maintenance

Brother HL4-PS Postscript	4ppm	£965
Brother HL6 – NEW –	6ppm	£427
Brother HL10-PS	10ppm	£1265
Brother HL10-DV	10ppm	£1016
Brother HL10-DPS	10ppm	£1435
Canon LBP4 LITE	4ppm	£478
Canon LBP4 + 1.5M RAM	4ppm	£639
Canon LBP-8 Plus IIR	8ppm	£1420
Canon LBP-8 IV 600DPI	8ppm	£932
Epson EPL-4300	4ppm	£520
Epson EPL-5000	6ppm	£439
Epson EPL-5200 – NEW –	6ppm	£525
Epson EPL-7500 PS	6ppm	£1135
Fujitsu VM600	6ppm	£539
HP Laserjet 4 ML	4ppm	£757
HP Laserjet 4	8ppm	£1049
HP Laserjet 4L – NEW –	4ppm	£459
HP Laserjet 4M PS	8ppm	£1369
HP Laserjet 4Si	16ppm	£2199
HP Laserjet 4Si MX 1200 DPI	16ppm	£3325
NEC Silentwriter S62P #PS	6ppm	£990
NEC Silentwriter S102	6ppm	£893
NEC Silentwriter2 290	8ppm	£1125
NEC Silentwriter 290P PS	8ppm	£1469
OKI OL400E	4ppm	£399
OKI OL410		£589
Panasonic KX-P4410	5ppm*	£445
Panasonic KX-P4430	5ppm*	£579
Panasonic KX-P4451 DB	11ppm*	£839
Panasonic KX-P4455 PS	11ppm*	£1249
Star LP-4 Post Script	4ppm	£759
Star LS-5	5ppm	£473
Star LS-5 EX (RISC Based)	5ppm	£595
Star LS-5 TT True Type + Mac	5ppm	£739
Star LP-8 III Postscript	8ppm	£1125

* 2 years on-site warranty		
• HP Laserjet 4L 3 years on-site		£100
• HP Laserjet 4Si 3 years on-site		£505
• HP Laserjet 4/4M 3 years on-site		£170

Laser Toners

Canon 2, 3 & 4	£52	EPL 71/7500	£117
KX-P4420/50i/55	£20	HP4/4M	£72
Canon LBP8-IV	£75	EPL 8100	£117
KX-P4420/30	£30	HP Laserjet 4L	£59
Canon 8/Star LP8	£59	Qume Crystal (3)	£84
NEC SWriter	£84	OKI OL400/800	£21
Epson GQ	£12	Star LP4	£52
HP/II/D, III/D	£60	OKI OL400e	£17
EPL 40/41/4300	£55	Star LS5	£69
HP IIP, IIIP	£54	VM800 8K pages	£99

Laser RAM Upgrades

Type	1M	2M	4M
IIP, IIIP	£49	£80	£132
II & IID	£60	£96	£142
LJ4/4M	£69	£75	£1758M/£279
EPL4100	–	£120	– £12K/£52
KX4420/50i	£59	£89	£149
NEC S62/S102	£99	£180	–
Star LBP	£139	£275	–
Laserjet 4L	£75	–	–

Jetpage Postscript Cartridge

- HP IIP/IIIP **£225**
- IID & III **£227**

Various Add-Ons

- Laserjet Appletalk Interface **£135**
- HP Adobe Postscript + Cartridge **£359**
- Pacific Page Postscript **£259**
- HP Premier Font Collection **£28**
- Laserjet Various Font C'tridges from **£45**
- HP Postscript Module for LJ4 **£270**
- Laserjet 4 Powered envelope feeder **£199**
- Jetdirect Ethernet Card for Laserjet IIISi/4/4Si **£359**
- 500 Sheet paper cassette (3rd Bin) **£205**
- HP/IIIP/IIIP Lower Cassette Tray **£115**
- Canon LBP-4 Lower Cassette Tray **£96**
- Ozone Filter P4420 **£9** • P4450/55 **£20**

Panasonic Printers

Printer	CSF	Ribbon
KX-P1123	£129	£49
KX-P1170	£98	£59
KX-P1624	£267	£126
KX-P1654	£334	£126
KX-P1695	£270	£126
KX-P2123M	£148	£69
KX-P2124	£220	£89
KX-P2180M	£128	£69
KX-P2624	£272	£126
KX-P2023	£158	£155

FREE – Printer lead with every Panasonic printer listed above

Includes 12 months on-site warranty

- Dustcover for 80 column printer **£6**
- Serial Interface for above Printers **£46**
- Black Ribbons for P1081, 1180, 1124 **£7**
- Brown, Blue or Red Ribbons for KX-P1081/1592/1595/1695 **£9 each**
- 32K Buffer for above Printers **£16**
- Colour Kit for KX-P2180; KX-P2123 and KX-P2124 **£37**

Citizen Printers

120D+	£94	Swift 200	£178
PN-48	£179	Swift 240	£200
Swift 90	£132	Swift 240C	£212
Swift 90C	£198		

2 years parts and labour warranty on all above Citizen Printers.

- Swift 24 Ribbons; Black **£4**; Colour **£13**
- Cut Sheet Feeder for 80 col. printers **£75**
- Citizen 120D Ribbons **£3.50**
- Archi Colour Printer Driver **£15**

Hewlett-Packard Printers

DJ500 Colour	£242	DeskJet 1200C	£1045
DeskJet 510	£199	DeskJet 1200C PSE1452	
DJ550 Colour	£399	Deskwriter 550C	£459
DJ Portable	£175	PaintJet XL300*	£1675
Deskwriter	£229	PaintJet XL300 PSE2619	
Deskwriter 500C	£349	Quiet Jet Plus	£299

* Includes 12 months on-site warranty

3 years on-site maintenance available as follows:

DeskJet & DeskWriter mono	£55
DeskJet & DeskWriter colour	£65

- PaintJet Cartridge Black **£17**; Colour **£27**
- DJ Portable CSF **£49**; Carrying Case **£49**

Hi-quality InkJet Paper

A4 90gms 500 Sheets **£9**

Desk Jet 500 Accessories

- Ink Cartridges Black **£16**; Colour **£23**
- High Capacity Ink Cartridges Black **£25**
- Ink Refill Double Pack (JetFill) **£10**
- Ink Refill High Capacity (Jet Fill) **£16**
- DeskJet Turbo Driver (only £39 when purchased with printer) **£45**
- Archi – DJ550 Colour Printer Driver **£14**
- Epson FX Emulation Cart. (500 mono) **£45**
- IBM Proprinter Emulation Cartridge **£59**
- Wordperfect Cartridge **£89**
- DJ 500 Dust Covers **£6**
- 636G 50 x Transparencies A4 **£40**
- 636J 50 x Glossy Paper A4 (also XL) **£40**
- 630Z 50 x Cut Sheet Paper A4 **£15**

Plug In Font Cartridges for DJ 500

22706B – Prestige, Elite, Line Draw	£55
22706C – Letter Gothic & HP Line Draw	£56
22707P – Proprint Emulation Cartridges	£57

HP PaintJet/XL Accessories

- 630P 200 Z-Fold paper 8.5 x 11 **£14**
- 630Q 50 Transparencies 8.5 x 11 **£39**
- 630S 50 Transparencies A4 **£40**
- 630Y 200 Cut Sheets 8.5 x 11 **£14**
- 631Y 200 Cut Sheets A4 **£18**

Epson Printers

	Printer	CSF	Ribbon
FX870	£265	£39	£4
FX1170	£335	£69	£6
LQ100	£132	–	£4
LQ570+	£201	£39	£4
LQ870	£355	£47	£6
LQ1060	£585	£155	£6
LQ1070	£310	£69	£6
LQ500	£204	–	–
LQ1170	£434	£69	£6
LQ2550	£669	£360	£6
LX100	£114	–	£4
LX400	£92	£69	£4
LX850+	£134	£69	£4
LX1050	£203	£125	£6
SQ870	£419	£170	£23
SQ1170	£555	£155	£23
SQ2550	£669	–	£23
Stylus 800	£219	–	£10

Epson RS232 Interface

- Standard **£28**; +8K Buffer **£75**
- LQ100 Tractor Feed **£29**
- FX850/LQ800/850 Tractor Feed **£69**
- FX/LQ1050 Tractor Feed **£85**
- LQ2500/2550 Tractor Feed **£90**
- Dust Covers for 80 col. printers **£6**
- Stylus 800 Transparencies (50) **£35**

Canon Bubblejet Printers

	Printer	CSF	Bin	Ink Cart
BJ10SX	£165	£43	–	£16
BJ200	£244	–	–	£16
BJ230	£280	–	–	£16
BJ300*	£305	£88	£88	£12
BJ330*	£369	£92	£79	£12
BJC800C	£1219	–	–	£16

- BJ10E/10EX/10SX/200/230 Jumbo Ink Refill Pack (Jetfill Twin Pack) **£12**
- Optional battery pack for BJ10EX/SX **£33**

* Includes 12 months on-site warranty

Professional Printer Stand



The professional printer stand takes hardly more space than your printer. Due to the positioning of the paper feed and re-fold compartments, ie. one above the other, the desk space required for your printer functions is effectively halved. Its ergonomic design ensures smooth paper flow and automatic refolding.

80 Column version **£16**
132 Column version **£25**

Perspex Printer Stand

Give your computer system a touch of Class with our elegant smoke finished Perspex Printer Stand.

80 Column version **£14**
136 Column version **£18**

Universal Printer Sharers

Connect up to 4 Micros to 1 Printer or 4 Printers to 1 Micro with our combined Share/Changer switch boxes.

Standard Low Cost Sharers

Connects	Serial	Parallel
• 2 to 1	£8	£9
• 3 to 1	£11	£12
• 4 to 1	£15	£16

Professional Sharer Units

Connects	Serial	Parallel
• 2 to 1	£12	£13
• 3 to 1	£15	£17
• 4 to 1	£24	£26

Auto Printer Sharer Switch

Connects	Serial	Centronics
• 2 to 1	£27	£29
• 4 to 1	£44	£45
• 8 to 1	-	£75

256K Multi Spooler

These Parallel Auto Printer Sharer Switches have built-in 256K Buffers.

• 2 In/2Out	£99	• 4 In/2 Out	£115
• 8 In/1 Out			£149

(Cables for all printer switches are from £5 each. Please specify the type required when ordering).

Compact Converter Unit

Serial Parallel to Serial	£32
---------------------------	-----

Listing Paper

• 1,000 Sheets 9.5" x 11" Fanfold	£7
• 2,000 Sheets 9.5" x 11" Fanfold	£11
• 1,000 Sheets 9.5" x 11" NCR 2 Part Fanfold	£21
• 1,000 Sheets 15" x 11" Fanfold	£9
• 2,000 Sheets 15" x 11" Fanfold	£16
• 1,000 Sheets true A4 Fanfold Paper 70gms	£11
• 2,000 Sheets true A4 Fanfold Paper 70gms	£21
• 500 Sheets A4 80gms Bond	£3.50
• 500 Sheets A4 90gms Cartridge for Ink Jet/Laser printer	£9

(All our Fanfold paper is Micor perforated leaving a smooth clean edge when the tractor feed strips are detached).

Cross Over Manual Switch

2 In/2 Out Parallel	£29
2 In/2 Out Serial	£28
3 In/2 Out Serial	£36

Printer Ribbons & Various Dust Covers

Type	Ribbons	Dust Covers
BBC B/BBC Master	-	£6
Archimedes Micro pair	-	£9
Citizen 120D	£3.25	£6
EX800/1000	£6	£6
RX/FX80/85/800/MX80	£2.95	-
FX/MX/RX100/1000	£3.95	-
Kaga/Taxan KP810/815	£6	£6
LQ400/500/550/800/850	£5.50	£6
LQ1050/LQ2500	£12	£6
LX400/800/850	£3.50	£6
M1009/GLP	£2.95	£6
NEC P2200	£4.50	£6

Dust covers for most 80 column printers available at £6 each.

Printer Labels

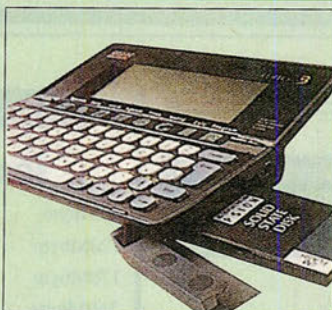
(On continuous Fanfold backing sheet)	
1,000 90 x 36mm (Single Row)	£4.50
1,000 90 x 36mm (Twin Row)	£4.60
1,000 90 x 49mm (Twin Row)	£4.95
1,000 102 x 36mm (Twin Row)	£4.70

Laser Printer Labels on A4 Sheets	
3750 - 70 x 29mm (3 Rows x 10)	£15.50
2400 - 70 x 37mm (3 Rows x 8)	£15.25



24 Hour Credit Card Order Line
(0582) 74 55 55 / 48 77 77

Psion Series III



- Series 3 Computer 128K £108
- Series 3 Computer 256K £159
- Desk Stand £15
- RAM Solid State Discs (SSD)
- 128K £48 • 512K £97 • 1Mb £199
- Flash Solid State Disc (SSD)
- 128K £30 • 556K £48 • 512K £79
- 1mb £139 • 2Mb £199

Communications

- Parallel Interface Link £25
- RS 232 Serial Link for PC £58
- RS 232 Serial Link for Mac £59

Various

- Mains Adaptor 9V AC £12
- Spreadsheet £59
- Professional Finance £42
- Spelling Checker/Thesaurus £42
- Desk Stand £15

Commander Joystick

- Connects directly to BBC Analogue port
- Fully compatible with all BBC Joystick controlled games
- Switchable springs allow selection of floating or centering operation
- Trim adjusters for both X and Y axes for fine centre adjustment
- Convenient stick mounted fire button with additional base buttons.

Price: £15

Surge Protector Plug

Fitted in place of your normal mains plug, this device protects your equipment (and data from corruption), against mains high voltage transient spikes/surges caused by lightning or thermostats switching.

Protection for only £8.50

Beeb PC BASIC

Designed to program authors to convert BBC programs to run on IBM PC's.

Price: £38

Beeb DOS

Allows IBM PCs/Compatibles to read Acorn format discs £39

Plotters

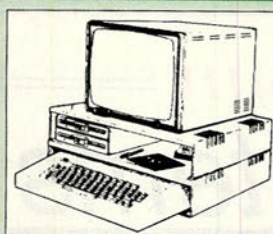
- DXY1100 £650 • DXY1200 £835
- DXY1300 £1049 • Sketchmate A4 £349
- Sketchmate A3 £495
- Roland Plotter Fibre Tip Pens £7.50
- HP7440AU £665 • HP7475AU £899
- HP7570A £POA • HP7575AU £2529

Watford Catalogue

200 Pages Full Colour Catalogue/
Technical Guide now available.

Tel: (0582) 48 77 77
for your FREE copy

Plinths for the BBC Master and A3000



- Single 490 x 310 x 105mm £14
- Double 490 x 310 x 210mm £27
- A3000 Single Plinth (very sturdy & precision made), has a slot on the left for the switch & cut out on the right for 3.5" Disc Drive £15

Available in 2 full A4 versions, desk resting and shelf clamping. Paper is held firmly by means of a plastic retaining ruler and a clip grip.

Copy Holders

- Desk Top £8; • Angle Poise £12
- Copy holders as above but with a battery operated, remote controlled cursor/ruler. (By hand or foot pedal). Batteries 2 x AA not included.

- Desk Top £15; • Angle Poise £20

4 Way Mains Distribution Socket

4-way top quality mains trailing sockets. Supplied wired up with mains plug ready for use. Can be screwed to floor or wall if required. Very useful for tidying up all the mains leads from your peripherals. £9.50

Aries Spike Cleaner Unit

A 4-way mains distribution unit as above with a built-in Surge Arrester, providing protection for your complete computer /Hi-Fi system. £16

Mouse Cleaning Kit

To obtain trouble free operation and prolong the life of your mouse, the high tech rodent requires regular cleaning. Our deluxe mouse cleaning kit is ideal for the purpose. £3

Archi Mouse Port Splitter

Our handy little splitter unit eliminates the risk of damaging your micro due to constant plugging and unplugging of the mouse by allowing you to connect both a joystick and a mouse simultaneously to your Archimedes. £10

WE Mouse House

Treat your mouse to a cosy Mouse House. This handy little gadget solves the problem of where to store your mouse when it is having a rest. Made of sturdy plastic, the WE Mouse House attaches to the side of your computer, monitor, disc drive, etc. **Only £3**

Spares for the BBC Micro

UHF Modulator	£4
Speaker & Speaker Grill	£5
Keyswitches	£1.50
16Mhz Crystal	£2
32.768Mhz Crystal	£2
17 way Keyboard Conn.	£4
Master Power Supply	£69
Master Keyboard	£62
Master Casing	£49
BBC B Casing	£13
Perspex Keystrip Holder	£3
BBC B Keyboard	£35
BBC B Power Supply	£49
Master ULA CF30047	£15
Master ULA CF30060	£10
Serial ULA	£13
Video ULA	£14

User Port Splitter Unit

Gone are the days when you had to plug and unplug devices from the User Port. This extremely usefull little device allows you to connect two devices simultaneously to the BBC B & Master User Port.

Excellent Value at £22

- Official orders accepted from government, educational establishments and PLCs.
- Shop Hours: 9am to 6pm, Monday to Saturday. Late night Thursday until 8pm. Free customer car park.
- Mail Order Inquiries: 9am to 6pm, Monday to Friday only.
- Technical Inquiries: 9.30am to 5.00pm, Monday to Friday.

Carriage (inc. Insurance) Charges

	1st Item	2nd & Subsequent Item
Software	£6.00	£2.00
Hardware	£7.00	£5.00
Lasers	£9.00	£7.00
Accessories	£5.00	£2.00
Small Items	£4.00	£2.00

PS. Many software packages qualify for the small item tariff.

For Next Day Working Day Delivery Service, simply double the cost. All charges subject to VAT.

Above carriage charges apply to UK mainland only. On export orders, carriage is charged at cost.

Watford Electronics Ltd

Established 1972

Mail Order & Showroom:

Jessa House, Finway, off Dallow Road, Luton, LU1 1TR, England
Tel: 0582 48 77 77 Tlx: 8956095 WATFRD Fax: 0582 488588

Showroom Only:

Jessa House, 250 Lower High Street, Watford, WD1 2AN, England
Tel: 0923 237774 Fax: 0923 236642

Offers and all items are subject to availability. Prices may have to change for reasons beyond our control. Specifications on products are correct at the time of going to press and given in good faith, but may have to change without notice. Please check suitability of peripherals with your system/s, before ordering. All trademarks are acknowledged. Goods are sold subject to our standard terms and conditions of sale and are available in request. GOODS ARE NOT SOLD ON TRIAL BASIS. E&OE. VAT: UK and EC customers: please add 17.5% VAT to the total cost, including carriage.

Authorised Education Dealers



0420 561111

Alsystems

47 Winchester Road
Four Marks
Alton
Hants GU34 5HG

Come and see us at
Acorn World.
We will have full
technical information
on Hard Disc, Optical,
and Cartridge Drives.

Don't buy until you
have spoken to us!

See you on Stand 92!

SEE US AT

Acorn WORLD STAND 92

Please Note: Prices quoted in this advert are subject to change. Please telephone for latest information.

3.5 in BARE HARD DRIVES

SCSI

85Mbyte	£190.00
120Mbyte	£210.00
170Mbyte	£234.00
250Mbyte	£300.00
380Mbyte	£536.00
450Mbyte	£580.00
525Mbyte	£640.00
700Mbyte	£773.00
1050Mbyte	£999.00
1600Mbyte	£1499.00
2000Mbyte	£1999.00

IDE

40Mbyte	£125.00
85Mbyte	£170.00
120Mbyte	£190.00
170Mbyte	£230.00
210Mbyte	£279.00
245Mbyte	£324.00
340Mbyte	£365.00
450Mbyte	£425.00
525Mbyte	£620.00
800Mbyte	£985.00
1050Mbyte	£1199.00

128Mbyte Magneto-Optical Drive
(A5000 internal)
£699.00

20Mbyte Floptical Drive
(A5000 internal)
£336.00

650Mbyte Multi-Session CD-ROM Drive
£299.00

All prices are exclusive of VAT and carriage.

ARM TECH (UK) LTD

AUTHORISED
ACORN DEALER

86 Meadowbank, Moor Lane, Holway
Holywell, Clwyd. CH8 7EF
Tel/Fax :- 0352 715840

OPENING HOURS MON-SAT 10am-6pm SUNDAY 10am-2pm

November

Drives IDE SCSI HARDWARE UPGRADES

80meg	£179	£195	ARM 3 Upgrade with FPA socket	£179
120meg	£199	£225	Canon BJ10 Turbo Driver (CC)	£49
170meg	£245	£275	DeskJet/LaserJet/JP150 Turbo Driver	£49
213meg	£299	£329	Dongle Dangle	£7
250/240meg	£325	£349	Dust cover (Keyboard + Monitor)	£12
343meg	£395	£419	Acorn Floating Point Upgrade Pack	£99
545meg	£659	£699	Hawk V9 Video Digitiser	£199
1374meg	£.....	£1299	I/O Expansion Card	£79
A3000/A3010 60meg	£299		ArmStick Joystick Interface	£8
A3000/A3010 80meg	£329		Keyboard Extension cable	£27
A3000/A3010 120meg	£399		Midi Upgrade to I/O Exp. Card	£69
For External Drives Please			Mouse Extender	£8
Add £89 For Case/Cables.			Micro Mouse (Clares)	£31
			Scanlight (A4) (CC)	£299
			Scanlight Junior 256 (CC)	£199
			Speed King Joystick	£11
			Quickjoy Joystick	£9
			Risc-OS 3 ROMS	£42
			Risc-OS 3 Carrier Board 300/400	£21
			Serial Upgrade A3000	£19
			User & Midi Podule A3000	£49
			Vision Digitizer Mono	Int £59/Ext £79
			Vision Digitizer Colour	Int £79/Ext £89

CD-ROM DRIVES

Toshiba, The Fastest Drive
On The Market. Photo CD
Compatible, MultiSession
And Double Spin Speed.
Internal Unit **£469**
External Unit **£539**

OPTICAL DRIVES

Fujitsu Optical Hard Drive
(SCSI) 128meg Removable
Disks That Are Read/Write
With A Data Transfer Rate
Of 600k/Sec.
Internal Unit **£745**
External Unit **£839**
128meg Optical Discs **£40**

SCSI / IDE

CONTROLLERS

Morley 16bit Scsi	£149
Morley 16bit Cached	£199
Morley A3000 Scsi	£169
QD 16bit Scsi	£139
QD A3000 Turbo Scsi	£159
HCCS IDE	£89
D.T. Projects IDE	£79
IDE 300/400/3000	£89

MONITORS

Acorn Col. AKF30/40	£199
Acorn Multi AKF18	£299
Microvitec Multi-Sync	£399
Taxan 795A	£489

LASER DIRECT

HiRes4 (LBP-4)	£999
HiRes8 (LBP-8)	£1319
Toner LBP-4/8	£65/£79

RAM UPGRADES

A3000 IFEL 2 meg.	£55	A3020/A4000 2 To 4 meg	£79
A3000 4 meg.	£149	A400 RAM per meg.	£39
A3010 2/4 meg.	£39/£129	A5000 2 To 4 meg.	£89

ACORN COMPUTERS

A5000-2M80HD / A5000-L /Curve Sys.	£1276/£1318
A5000-4MHD160 / 4MHD160 L/Curve.	£1445/£1488
A5000-4MHD160 Home Office System.	£1531
A4000-Home Office Sys. with ARM 250 Processor,	
Acorn Colour Monitor, 80meg HD, EasiWriter 2,	
Desktop Database, etc.	£935
Home Office With Acorn MultiScan.	£977
A4000-HD80 / A4000-HD80 L/Curve.	£850/£892
A4000-HD80 MultiScan/ A4000-HD80 L/C	£892/£935
A4-4meg 60megHD / A4-2meg Floppy	£1699/£1399
Acorn pocket book.	£212
A3010-Action Pack / A3010-L/Curve.	£339/£637

A3010 ULTIMATE EXPANSION

MultiPod+2 slot +HD space	£42
MultiPod+20mHD+PSU2 slot	£221
MultiPod+60mHD+PSU2 slot	£299
20meg HD for MultiPod	£169
60meg HD for MultiPod	£245
PSU+Fan+Buffer Kit (A3010)	£30
MicroPod Scsi (Inc CDFS)	£99
MicroPod Analogue	£29
MicroPod Colour Digitizer	£79
MicroPod HiVision Colour	£129
MicroPod Midi	£49

MY WORLD UTILITY DISCS

These discs are top quality multi-layer drawings for use with the My World program. Ideal for Schools. MW001 & MW003 are a useful tool for help within the National Curriculum (KS 1/2)	
Disc MW001 ANCIENT EGYPT	£12.95
Disc MW002 CHRISTMAS	£9.99
Disc MW003 ANCIENT GREECE	£14.95

Where to find us

From Chester follow
old A55 past Holywell
until you see Moor
Lane on your right,
turn down Moor Lane,
we are at the bottom
on the right hand side
(Big White Farm
Gate) From Rhyl (As
Above) but turn left
into Moor Lane before
Holywell.



EEC add 17.5%vat to all prices except books. Prices and
specifications subject to change without notification. Carriage is
free (Except for books/Software/Risc-OS 3.1 & PRM's) these will
be shipped at cost. Goods offered subject to being unsold and/or
available. Goods not offered on trial basis. Next day delivery
please add £12 + vat. Otherwise All goods shipped within 48 hours
subject to availability. Restocking fee on non-defective returns.

APPLICATIONS

A3010 Joystick Control	£17
ArmTech Joystick I/Face	£27
Acorn Advance	£99
Armadeus (Clares)	£59
Art Works (C)	£129
Archivist Pro	£38
ArcTerm 7 (Serial Port)	£59
Compression (CC)	£36
Desktop C v4 (Acorn)	£199
Drawbender (ICS)	£14
Desktop Thesaurus (RISC)	£20
Desktop Tracker (L/Edge)	£54
DeskTools (RiscOs 3 Only)	£10
Digital Symphony	£44
EasiWord 2 (Minerva)	£55
Easy Writer (Icon Tech)	£159
Equator (CC)	£39
Euclid 2 (Ace)	£55
Eureka (Longman)	£99
Font FX (DataStore)	£10
Fontasy (ICS)	£22
Graphbox Pro (Minerva)	£22
Home Accounts (Minerva)	£35
Hearsay 2 (Beebug)	£74
Image Outliner (Iota)	£89
Impression (CC)	£129
Impression Junior (CC)	£76
Impression Bus Supp (CC)	£49
ISO Pascal Rel.2 (Acorn)	£89
Labeller (Arm Tech)	£10
Maggie (Logotron)	£49
Notation (Risc)	£55
PC Emulator V 1.8 (Acorn)	£99
Placard (ICS)	£9
Pinpoint (Logotron)	£89
PipeDream 4 (Colton)	£169
Poster (4Mation)	£79
Pro Artisan (Clares)	£76
ProDriver DJ500/550 Colour	£40
Prophet (Apricot)	£159
Render Bender v2 (Clares)	£105
Rhapsody v2 (Clares)	£49
REVELATION v2 (Logotron)	£99
Schema (Clares)	£99
ShapeFX (Data Store)	£9
ShowPage (CC)	£119
SmArt	£55
Snippet (4Mation)	£26
Studio 24+ (EMR)	£149
TypeStudio (Risc)	£39
Vector (4Mation)	£79
Vox Box (Clares)	£49
Wordz (Colton)	£99
Worra Cad (Oak)	£84

GAMES

Axis (TBA Software)	£22
Alderbarren (Evolution)	£27
Arcade Soccer (4D)	£15
Bambule (Arxe)	£17
Battle Chess (Krisalis)	£25
Blitz (Arxe)	£17
BlowPipe (QD-VT)	£15
Break 147 & Superpool (4D)	£26
Bubble Fair (Eterna)	£17
Catalyst (4D)	£20
Chess 3D (Micro Power)	£15
Chocks Away 2 (4D)	£22
Chocks Away Extra M	£16
Chocks 2 Compendium (4D)	£30
Chopper Force (4D)	£23
Chuck Rock (Krisalis)	£19
Elite (Hybrid)	£32
Enter the Realm (4D)	£20
E-Type Compendium (4D)	£21
Fervour (Clares)	£19
Font School 4. -5/ 5-7 / 7+	£21
GODS (Krisalis)	£19
Gribbly's Day Out (C/A)	£20
Hero Quest (Krisalis)	£24
HoledOut Compendium	£22
Ioion (Software 42)	£21
James Pond	£20
Krisalis Collection	£25
Last Ninja (Superior)	£19
Lemmings (Krisalis)	£22
Lemmings EXTRA Levels	£17
LinkWord Ger/Fre/Spa, each	£39
Mad Prof Mariarty (Krisalis)	£16
Manchester Utd Europe	£20
Micro Maths/English Each	£22
Micro French/German Each	£22
Noddy's Playtime	£22
10 / 10 Maths/English Each	£21
10 / 10 Early Learning 3/7	£21
MIG 29 Fulcrum (Dom)	£26
Pesky Muskats (Coin Age)	£19
Populous (Krisalis)	£25
QUEST FOR GOLD (Krisalis)	£20
Saloons Cars Deluxe (4D)	£27
Spheres of Chaos	£20
Sim City (Krisalis)	£29
Smudge The Spaniel Age 4/8/22	£22
SWIV (Krisalis)	£20
TechnoDream	£21
Turbo Challenge 2	£22
Virtual Golf (4D)	£29
Zool (Gremlin)	£22
Zelanites (Micro Power)	£19
IF THE TITLE YOU REQUIRE IS NOT LISTED, PLEASE GIVE US A CALL.	



14-Day FREE Trial

No Quibble Money-Back Guarantee

New

Maths (Algebra)

For Children 6 to 16 Years

10 out of 10 Mathematics (Algebra) is packed with subjects, levels and activities to challenge all children from Key Stage 1 right up to Key Stage 4.

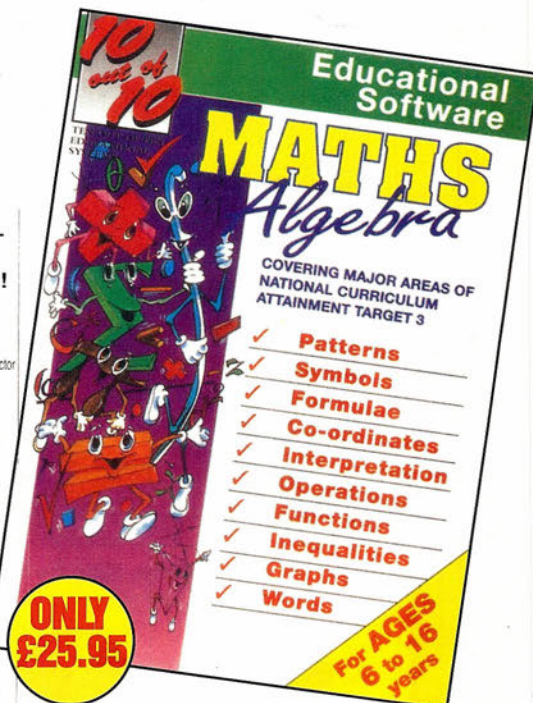
The graphics are automatically selected to suit the age of the child playing the games but a parent/teacher override allows the games to be customised to meet the child's needs both educationally and for the gameplay. This wide age range coverage means that the product offers excellent value for money and can be used by a family or school for many years.

As with all the titles in the 10 out of 10 series, the six games in the algebra suite have been carefully designed to motivate and reward the children playing. And, in addition to the six mathematical games, there's an extra one supplied FREE.

The free game - WordFit - is based on the popular game in the 10 out of 10 English package. It has been specially adapted to help children to practise spelling words connected with Algebra.

The SIX challenging games cover ALL these Levels of National Curriculum ATTAINMENT TARGET 3 - and MORE!

- | | |
|---|--|
| <p>Graphoid</p> <p>3b.2 Use inverse operations in a simple context</p> <p>4c.2 Work with co-ordinates in the first quadrant</p> <p>5b.4 Use co-ordinates all four quadrants</p> <p>6c.2 Plot simple mappings</p> <p>7b.1 Solve simple inequalities (graphically)</p> <p>8b.2 Locate regions by inequalities</p> <p>Processor</p> <p>2a.2 Use number patterns up to 10</p> <p>3b.1 Inputs and outputs to simple function machines</p> <p>4a.2 Explore the properties of numbers</p> <p>4b.1 Use simple formulae expressed in words</p> <p>6c.1 Use simple mappings</p> <p>8b.1 Solve a variety of linear and other inequalities</p> <p>Chain Up</p> <p>2a.3 Distinguish odd and even numbers</p> <p>4a.3 Recognise Mult'n. and Div'n. are inverse opp'n.</p> <p>5b.3 Understand co-ordinates in all four quadrants</p> <p>7b.4 Simultaneous equations - graphical methods</p> <p>8a.4 Interpret graphs of the form $y=mx+c$</p> <p>8c.1 Know the shape of graphs (eg. quadratic & cubic)</p> | <p>Hook It!</p> <p>2b.1 The use of symbols in place of numbers</p> <p>3a.4 Recognise whole Nos. divisible by 2, 5, or 10</p> <p>4a.1 Recognise terms like square, multiple, and factor</p> <p>5a.3 Understand terms like prime and square root</p> <p>6b.1 Solve linear equations</p> <p>8a.1 Manipulate algebraic equations</p> <p>Turbo Raft</p> <p>1a.1 Continue repeating patterns in objects</p> <p>3a.2 Explain number patterns</p> <p>5a.1 Add to sequences</p> <p>5a.4 Recognise patterns in equivalent fractions</p> <p>7a.1 Symbols to express the rules of sequences</p> <p>9a.2 Indices for negative and fractional values</p> <p>Rib Tickler</p> <p>2a.1 Explore simple number patterns</p> <p>4b.2 Use simple equations expressed in words</p> <p>5a.1 Generating sequences/interpreting instructions</p> <p>5b.1 Express simple functions in symbols</p> <p>7b.2 Solve simple inequalities</p> <p>8a.2 Using and rearranging functions</p> |
|---|--|



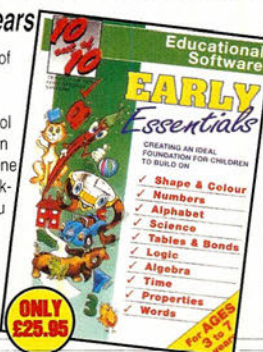
ALSO AVAILABLE - other subjects in the 10 out of 10 Series

Early Essentials

For Children Under 7 Years

Early Essentials is outstanding. All of the activities are not only very enjoyable but they're well thought through. Infant teachers in my school who've seen the package have been most impressed and I feel that it's one of the best multi-purpose infant packages I've seen in a long while. If you have young kids then get it for the home. If you're a teacher, hammer on the headteacher's door and beg for enough money to buy a copy.

- Archimedes World (July '93)



Maths (Number)

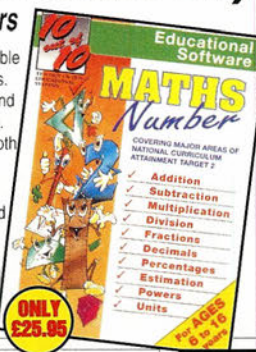
For Children 6 to 16 Years

This is a first rate set of games suitable for a wide range of ages and abilities. They are educationally worthwhile and exciting to play - a rare combination. They are highly recommended for both home and school use

- Archimedes World (Dec. '92).

10 out of 10 is unique in home-based programs because of the National Curriculum link and it makes a good resource for parents as well as good educational fun for children

- The Micro User (Sept. '92)



English

For Children 6 to 16 Years

With its elaborate system of colour-coded levels of achievement and multiple levels of difficulty, 10 out of 10 is a useful compilation of programs based on the current National Curriculum for English... The zappy delivery and range of activities is guaranteed to sustain the attention of even reluctant learners

- RISC User (Jan./Feb. '93)

Most importantly as the games are fun children can't help but learn.

- Acorn Computing (March '93)



The INNOVATIVE 10 out of 10 Series

These new suites of programs are a revolutionary step forward in educational software. They ALL use a unique system of automatically recording children's progress as they play and learn. This is just one of the many features which sets the 10 out of 10 Series in a class of its own.

Each package contains SIX expertly designed educational games covering TEN essential areas of a child's education. All packages cover a wide age range and subjects are available for all children from three to sixteen years of age.

As children learn from the games their progress is automatically recorded in 36 specific challenges - the National Curriculum Attainment Targets of these areas are optionally displayed on screen in subject-based packages. All the programs are designed to be fun for single players or groups and the assessment system can monitor the progress of up to 4000 children with no input from parent or teacher needed. Watch them, join in the fun or leave them and return later to check their progress. You're in control!

Available NOW - Phone 0742 780370 for a FREE TRIAL

Maths (Algebra) Maths (Number) English Early Essentials

COMING SOON in 1993 - Please phone for availability

Maths (Geometry) French German Science
Italian Spanish Junior Essentials

GUARANTEED TO EDUCATE
... or you don't have to pay!

Our FREE 14 DAY TRIAL is exactly what it claims to be! We don't bank any payment until you've had chance to test the software for yourself.

YOU CAN TRY IT FREE - THERE IS NO CATCH!

TELEPHONE 0742 780370 NOW!

HOW TO ORDER...

Each package is ONLY £25.95 and you can order by CREDIT CARD, CHEQUE or EDUCATION AUTHORITY ORDER. We will send you the software by First Class Post without processing the payment. If you do not wish to keep the package simply return it to us within 14 days and we will return your ORIGINAL cheque or order or not process your credit card for payment*. You need not even say why you are returning the package!

NO Questions, NO Quibbles, NO Hassle!

Order by Post or Phone from:

10 out of 10 Educational Systems

1 Percy Street, Sheffield, S3 8AU



0742 780370



Site and Network Licences are available - please ring for details.

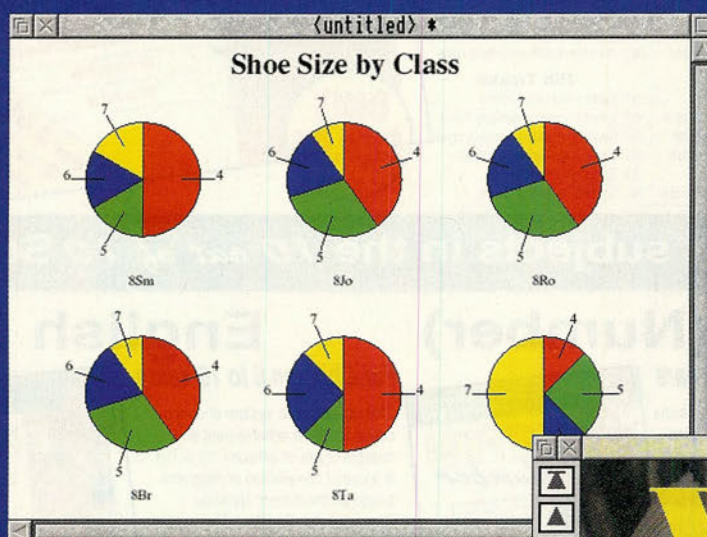
* The free trial may not be used in conjunction with any other offer.

.. FREE ... A chance for YOU to TEST THE BEST on your Acorn, Amiga or IBM/PC

*'the
best'
gets better...*



Squirrel 2

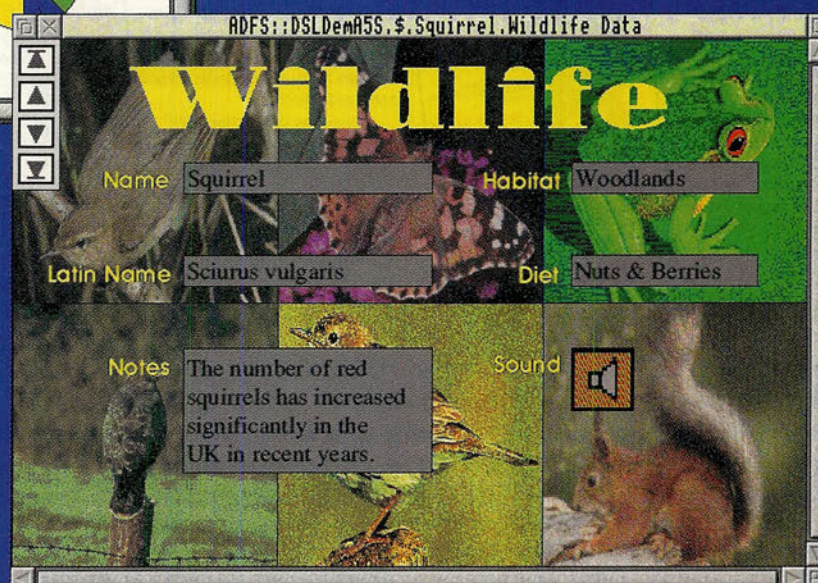


Squirrel 2 incorporates 39 separate enhancements which substantially increase Squirrel's power and flexibility.

This major upgrade makes the definitive RISC OS database even better.

New features include:

- *Data compression*
- *Faster queries*
- *Graphics and text on table backdrops*
- *Default field entries*
- *3D New look*
- *Improved validation*
- *Video buttons*
- *Automatic word wrap in multi line text fields*
- *Data may be displayed and edited in either card or list modes.*
- *Password protection to provide read only fields, and hidden fields.*
- *Integrated graphing facility*
- *Vast new range of mathematical functions*



Squirrel Single User	£ 139.00 + VAT
Squirrel multi user/Site Licence	£ 556.00 + VAT
Squirrel 'C' Developer's Toolkit	£ 99.00 + VAT
Postage & Packing	£ 5.00 + VAT

digital services

9 Wayte Street, Cosham, Portsmouth
Hampshire PO6 3BS Tel 0705 210600

Enter the ACORN WORLD

What's happening? What's being released? Who's going to be there? What's in it for me? All this and much much more is answered below

As you read this article, many Acorn software and hardware companies will be making their last minute preparations. Programmers will be burning the midnight oil. Writers will be proof-reading their latest manual. Discs will be running off the production line.

The deadline is 29 October. The event: the Acorn World show, this year hosted by Acorn Computers for the first time and sponsored by *Acorn User*. The Autumn show is the biggest event of the year for Acorn, the most auspicious time for any new releases and a haven for extra events, competitions and so on. All in all it is an exciting time of year and we have decided to dedicate part of this issue to let you know what is in store...

Show events

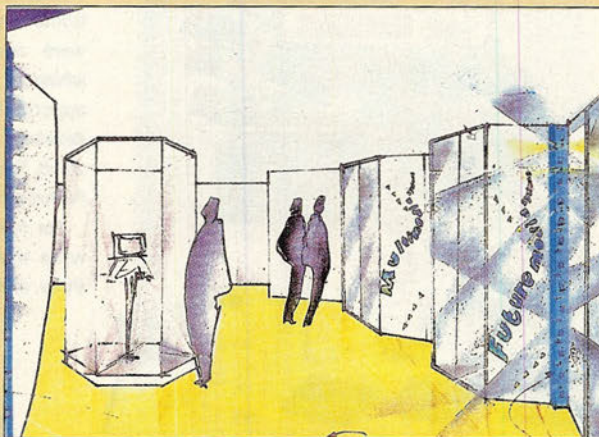
● As show sponsors, *Acorn User* staff will be out in force over the show weekend. We will, of course, have our own stand in the centre, but you can also catch us in the publishing area, demonstrating magazine layout using *Impression*. And the editorial team will be hosting a talk in the theatre, revealing the inner secrets of how we create *Acorn User* every month.

● But the part which is most exciting for us and for you, the visitor, are the inevitable new releases. We have picked out a selection of launches on page 48, but remember, this is only a selection. There are plenty more products coming out, so to get the complete picture, take a look at our stand-by-stand guide that starts on page 51.

● If you are involved in education, then you will be interested in Clare Johnson's column on page 61. As an education advisor for Bexley, Clare has her route all mapped out, and offers an interesting perspective on what is relevant for today's schools.

● At the other end of the scale, games fans should turn to page 65 for a pre-show glimpse of what could be one of the most exciting areas.

● Finally, there are several competitions and freebies to be found at the show. Our stand will



An artist's impression of the Acorn World entrance

feature a major contest: see page 63 for full details – and several stands will be running their own draws. Wyddfa Software are giving away a £50 software voucher and Cumana will have a CD-Rom competition on its stand.

● On the topic of freebies, pocket book owners will be able to pick up some PD software from the Acorn stand. And for those who like an attractive desktop, Acorn is giving away a copy of its new 3D icon set.

● So without further ado, let's take a look around...

The Acorn Gallery

For those who want to see ahead, the Acorn Gallery is the place to be. Show director, Kevin Coleman says: 'this is a way of showing where Acorn has been and where we are going.'

Acorn will show off its past, and reveal what you can expect in the future. Subjects range from Acorn's environmental record to the future of graphics; the next generation of machines and the move towards animation and TV techniques. Sound is on the move – the exhibition traces the journey from a beep to CD quality.



Show Details

Dates: 29 to 31 October

Opening times: 10 am to 6pm

Venue: Wembley Exhibition Centre, Hall 1

Advance tickets: Adults £5 Children £3

Families £15

On the door: Adults £6 Children £5

Ticket info: (0295) 788386

London Underground: The exhibition is a

five-minute walk from Wembley Park Station on the Metropolitan Line or a ten-minute walk from Wembley Central Station on the Bakerloo Line
British Rail: Wembley Stadium station provides a service from Marylebone Station, London. To reach the hall itself, follow local signs to Wembley.

Readers of *Acorn User* can get 50p off the price of a ticket on the door by bringing in the voucher below

ACORN

50
PENCE
OFF

WORLD

What's new

We take you on a whistle-stop tour of some of the new releases planned for the show

ACORN MACHINES

STAND: Acorn

If you're after a new machine, then keep a look out for Acorn's new deals. The A3010 bundle now costs only £399 and includes *Zool*, and *StartWrite*. Acorn has also cut prices on its other machines.

For those who relish the idea of 33MHz worth of speed, there is a new top-of-the-range A5000. For a full description of Acorn's plans, turn to this month's lead news story on page 7.



PROARTISAN 2

STAND 47, Clares

Without a doubt, this rates as one of the major software releases of the year. *ProArtisan 2* offers advanced bitmap graphics and the show provides an opportunity to compare it against its main competitor, *Revelation Image Pro*, on the Longman Logotron stand. See page 100 of this issue for the full review of *ProArtisan 2*.

For music lovers, *Rhapsody 3*, which allows you to write musical scores, will also be launched at the show, and hopes to build on its predecessor's success.

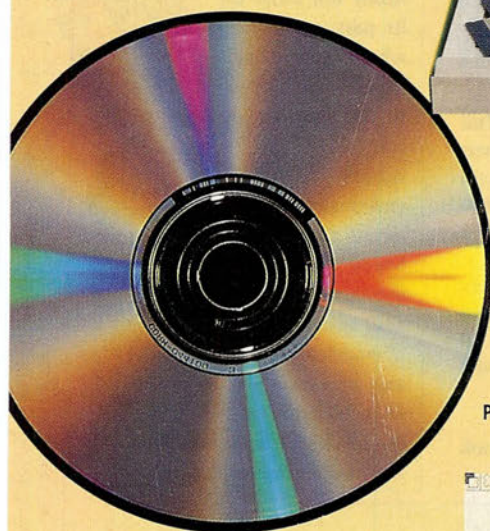
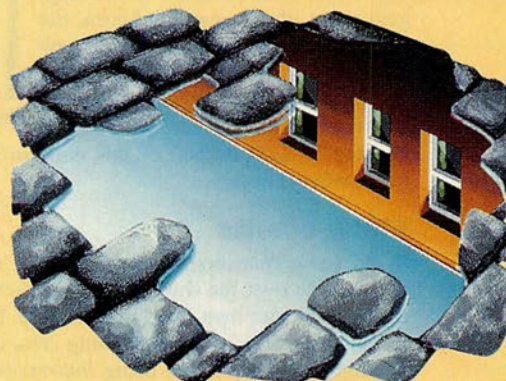


PHOTO CD

STAND 79, Kodak

At last: a chance to see the much-hyped PhotoCD in action.

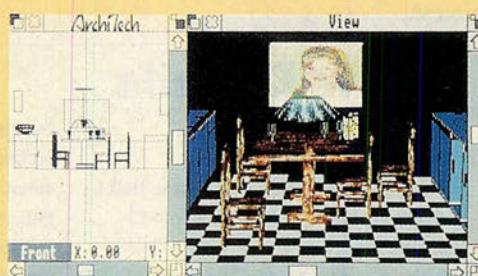
Kodak is offering a 25% discount, so bring a film along to the show and see the results on CD-Rom within a few days. We have a full review of PhotoCD this month on page 30.



LOW COST CD-ROM

STAND 41a, Cumana

Cumana has reacted to the release of PhotoCD with new hardware products and some aggressive pricing. Cumana will have its normal range of CD-Rom drives plus a new low-cost CD-Rom drive, priced at £299.



ARCHITECH

STAND 116, Explan

After a long wait, *Architech* is to be released at the show. Based on the program *Tabs*, *Architech* designs 3D models on screen with a colour-rendering system and 3D editor. These designs can then be used to create accurate 3D models – should be appealing to schools and home users. Also take a look at *Occasion*, an extended version of *Event* with diary, calendar, address book, phone book and notebook.

CRYSTAL MAZE

STAND 35, Sherston Software

As part of a growing trend to link software with TV programs, films and so on. Sherston has jumped on the bandwagon with its show release: *The Crystal Maze*. Based around the Channel 4 show, the player gets involved in a series of puzzles and exercises to collect crystals and ultimately escape from the maze.



NODDY

STAND: Acorn games area

Extremely successful on other formats, *Noddy's Playtime* is produced by Jumping Bean, and offers great value for money and a very polished approach.

There are several parts to this application, including a tour around Toytown. Highly suitable for home-use, it should be very successful in the Acorn market. If you are a primary teacher, or have young children, check it out for yourself.



And some others...

● *Prime Mover* by Minerva (stand 42) allows creation of simple animations from sprites. Also *Keyboard Trainer*: a new way of learning to play music.

● Academy television (stand 46) is releasing a range of new CD Roms, including the first in an Environmental series. Taking a variety of water issues – flood prevention, oil spills – it aims to provide information on a range of specific topics.

● *Talking Stories* from Wyddfa (stand 94) builds into an amusing story, using the children's responses. Like all Wyddfa software it uses sampled speech.

● Longman Logotron (stand 72) will show the latest addition to the *Landmarks* series: *Tudors and Stuarts*.

● Cambridgeshire Software House (stand 37) has a new control package. *Complete Control* avoids the need for expensive external peripherals.

● Morphing continues its ascendancy on Acorn machines with the release of Oak computer's *Rephorm* (stand 81).

● Topologika (stand 44) will have the new *Wordbank*, which collects words to create language spelling books.

● A new font supplier makes an entrance at the show. Look has a large range of fonts for £99 (stand 23).

● Meanwhile, Risc Developments (stand 77) releases its version of *C, Easy C*, for £50.

● Wild Vision continues its policy of innovation with multimedia card, Eagle M2, a 16-bit sound sampler named Lark and the Chroma 500 genlock card.

IMPRESSION PUBLISHER

STAND 67/68 Computer Concepts

Once again, Computer Concepts has set new limits for Acorn DTP software. The show will see the release of *Impression Publisher* which offers support for four-colour separations, automatic tracking and kerning, a bundled thesaurus, Tiff loading, 24-bit image handling and other features. Good news for those who take DTP seriously.

Meanwhile, a hybrid of the existing *Impression 2* package and the *Advance* wordprocessor will become *Impression Style*, a high-range wordprocessor costing only £99. This also offers a bundled thesaurus and many other new features. While you're at

the CC stand, check some other new releases – *AudioWorks* – for editing audio files, a new colour inkjet printer and its thesaurus/ dictionary.



REPLAY PLUS

STAND 121, Irlam Instruments

On the Irlam stand will be a new version of *Replay DIY*, with improved image quality and movie editing. Also check out a new professional sound sampling card. It's not gone into production yet, but the package will be aimed at those who need high quality sound.

DINOSAUR DISCOVERY

STAND 119, 4Mation

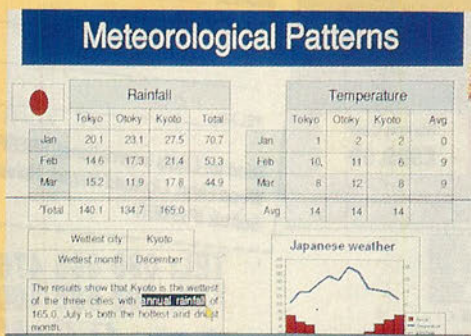
In topical mood, 4Mation is releasing its new Archimedes version of *Dinosaur Discovery*, which was popular on the Beeb. Also take a look at *Flossy the Frog*: a promising example of interactive fiction. Also showing: the new *Hatchback* program (see

page 99 of this issue) for our review.

FIREWORKZ

STAND 74, Colton Software

Stage two is underway in the Colton camp with the show launch of *Fireworkz*, an integrated spreadsheet and wordprocessor. For those who wish to work on documents containing text, plus calculations and charts, this release is well worth a look.



SEE US ON STAND 49

Acorn
WORLD

93

SPONSORED BY
BBC ACORN USER

120 MB
HARD DISC
& CD ROM
FOR YOUR
ACORN COMPUTER

FROM £289*

PER STATION



If you want to improve the performance of the computers in your school, and give more pupils access to peripherals such as hard discs, CD ROMs and high quality printers – then SCSI Share has to be the cost effective solution.

By choosing a SCSI Share system for your school you can, for example, turn your computers into powerful CD ROM Workstations for only £289* per station. This price includes delivery, installation, training and support.

SCSI SHARE PACKS

3, 4, 5 and 6 station packs are available

HARD DISC PACK

The HARD DISC PACK includes all you need to upgrade 6 existing Acorn computers with a 120Mb SCSI Share hard disc.

PACK INCLUDES:

120Mb Hard Disc – RISC OS Manager software – SCSI Share interfaces and cables – Delivery, installation and training.

Total Cost	Station Cost
£1350.00	£225.00

CD PACK

The CD ROM PACK includes all you need to upgrade 6 existing Acorn computers with a 120Mb SCSI Share hard disc and CD ROM drive.

PACK INCLUDES:

120Mb Hard Disc and CD ROM drive – RISC OS Manager software – SCSI Share interfaces and cables – Delivery, installation and training.

Total Cost	Station Cost
£1734.00	£289.00

POWER PACK

The POWER PACK includes all you need to upgrade 6 existing Acorn computers with a 120Mb SCSI Share hard disc, CD ROM drive and HP510 printer.

PACK INCLUDES:

120Mb Hard Disc and CD ROM drive – HP510 printer and driver software – RISC OS Manager software – SCSI Share interfaces and cables – Delivery, installation and training.

Total Cost	Station Cost
£2034.00	£339.00

WORKSTATION PACK

The WORKSTATION PACK includes 6 Acorn A3020 multiscan computers complete with a 120Mb SCSI Share hard disc, CD ROM drive and HP510 printer.

PACK INCLUDES:

6 A3020 multiscan computers – 120Mb Hard Disc and CD ROM drive – HP510 printer and software – RISC OS Manager software – SCSI Share interfaces and cables – Delivery, installation and training.

Total Cost	Station Cost
£5994.00	£999.00

All prices exclude VAT

LINGENUITY

A DIVISION OF LINDIS INTERNATIONAL

Lingenuity, Wood Farm, Linstead Magna, Halesworth, Suffolk IP19 0DU Tel. 098 685 477

SCSI Share packs are available direct from Lingenuity *Based on a 6-station CD ROM pack costing £1734
Lingenuity SCSI Interfaces and SCSI Software are © J. W. Ballance

SCSI SHARE DISC SHARER FOR ACORN COMPUTERS

FEATURES/BENEFITS

Installation Pack

Each SCSI Share pack comes complete with delivery, installation, training and support.

Easy to manage

SCSI Share will reduce the overall management requirement.

Fast

Rapid simultaneous access to peripherals – for example loading Impression II on 6 computers simultaneously takes only 4.5 secs.

Security

Software applications are 'locked' against deletion.

Warranty

All hard discs carry a two year warranty.

Clip the coupon or call 098 685 476 for further information and a SCSI Share Colour Brochure.

NAME _____
JOB TITLE _____
ESTABLISHMENT _____
ADDRESS _____
TEL NO _____ AU/11/93

Send to: Lindis International, FREEPOST,
Wood Farm, Linstead Magna, Halesworth,
Suffolk IP19 0BR

TEL: 098 685 476
FAX: 098 685 460

Getting I.T. Right

STAND BY STAND

Ian Burley shows you the sights in our A to Z guide to all of the stands at the Acorn World show

4MATION (119)

Interactive educational fiction is top of 4Mation's list, courtesy of *Flossy the Frog*. *Flossy the Frog* is set to be a big hit with schools according to 4Mation's Neil Souch.

A topical and trendy re-release from 4Mation is *Dinosaur Discovery*, first released in pre-Archimedes days on the Beeb. Other 4Mation regulars include the relatively new *Hatchback* graphics fill utility.

ACADEMY TELEVISION (46)

Britain's largest independent distributor of TV programmes has joined forces with Interactive Learning Productions and Yorkshire TV to produce CD-Rom multimedia titles for education. Watch out for *Water*, from Academy's Environment Series, *Directions 2000* which is for French students and *The Elements*, the first in a series of science discs.

ACORN COMPUTERS

As hosts of the show, Acorn will have over seven areas, including a games arcade, a creche, an education area, the gallery, a publishing area and their main stand. There will be glimpses of powerful new technology to come in the gallery.



Engaging more industry standards will be a priority too – expect to see some interesting developments in industry standard networking for example. *Photo CD* and multimedia with *Replay* full motion video will figure strongly. Once again Acorn is setting up continuous demonstrations at a special theatre presentation and among the guests will be Psion, which developed the Acorn PocketBook. Another

section will be dedicated to publishing, including professional printing.

ACORN USER

As sponsors of the show, the *Acorn User* team will be on hand offering technical advice and help to readers. There will also be a chance to see our new *Acorn User Handbook*, find out about our resource discs, and play *Chocks Away*. All are available to new subscribers, plus there's our huge competition.

ALEPH ONE Ltd (34)

Aleph One is sharing its stand with Atomwide. Aleph One is best known for Arm3 processor upgrades and cards to make the Archimedes run PC software at a comfortable speed. With Aleph One's current Arm3 stock being cleared at a cheap price, could there be a new replacement at the show?

ALSYSTEMS (92)

All sorts of hardware goodies are going to be featured by Alsystems, along with some special show deals. The accent is on 'big' with large screen Eizo monitors, hard drives up to 1 and 2Gb capacity and tape streamers for data backup.

ANGLIA TV (109)

Anglia is a prolific producer of educational titles and now has an expanding range of CD-Roms. Look out for CDs on *Castles*, *World* and *County Maps* as well as *Key Plus 3.0* and the latest version of *Key Author*.

APRICOTE STUDIOS (41)

If you need accounting software, Apricote's *Prophet* solution is one of the most successful. At the show the latest version will be on display.

ARM Ltd (66)

For the first time the designers of the chips which make the Archimedes special will be at an Acorn show. With luck, those interested should get a look at the new Vldc20 video chip as well as the Arm610 Risc processor.



The Acorn Action Pack (left) with an A3010 and bundled software will be part of an aggressive pricing campaign launched for the show. Arm Ltd will be showing off its latest chip technology (shown

below) and Acorn User will offer a show competition and a new subscription deal (shown above).



Revolution. The new CD-ROM. At only **£299** + VAT its pedigree may surprise you!



The Morley **Revolution** is the ultimate plug-in-and-go CD-ROM drive solution for Acorn 32bit computers.

This Revolutionary new system is the result of a unique Morley Electronics development, based around the latest CD-ROM drive from Sony. Developed specifically for the Acorn market, it is suitable for all Acorn 32bit desktop computers from the A3000 right up to the A540. There are no complicated setups or *commands. Merely plug in the

interface and drive, switch on and you are ready to go. Simple and quick, the Morley **Revolution** offers an exciting solution for requirements in education, the home, industry and office environments. Current applications include encyclopaedias, dictionaries, newspapers, digitised video and sound, clip art and a host of other programs offering exciting learning possibilities that would not be feasible without CD-ROM. The **Revolution** matches the capabilities of far more expensive

drives. It is Replay, multisession and Kodak Photo CD compatible, operates via Acorn's CDFS and is compatible with existing hardware running RISC OS 3. It can also use all available RISC OS based CD-ROMs, as well as access DOS based discs and run them through emulation. It even plays audio CDs!

Contact us for more details about the Morley **Revolution** CD-ROM or place your order and join the **Revolution** now.

Sony is the registered trademark of the Sony Corporation of Japan.

**JOIN THE
REVOLUTION NOW
TELEPHONE
091 257 6355
MORLEY
E·L·E·C·T·R·O·N·I·C·S· L·T·D**

**Expanding
Your Horizons**



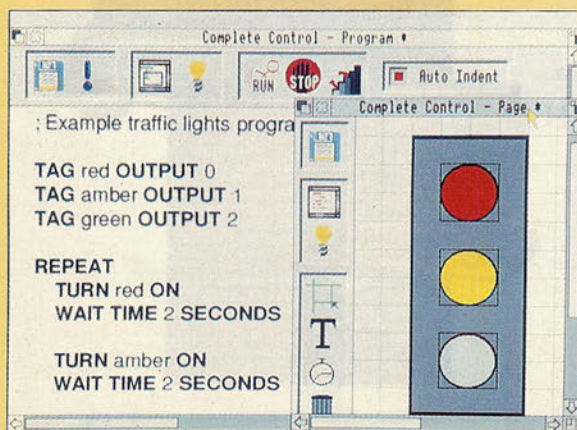
DEPT. B A U, MORLEY HOUSE, WEST CHIRTON, NORTH SHIELDS, TYNE & WEAR NE29 7TY TEL: 091 257 6355 FAX: 091 257 6373

BEEBUG (77)

Beebug will be at the show with a large range of hardware and software supplies at special show prices. Offers to check out include the A3010 Home Professional system and Beebug's beefed-up Acorn A4 portable.

CAMBRIDGESHIRE SOFTWARE HOUSE (37)

New products on the CSH stand this year include *Amazing Maths* for exercising your mental arithmetic. *Complete Control* is a software-only package which is designed to fulfil the objectives of a software and hardware-based control technology package for less cost. *Gemini* is a multi-option matching pairs memory concentration game.

**CLARES MICRO SUPPLIES (47)**

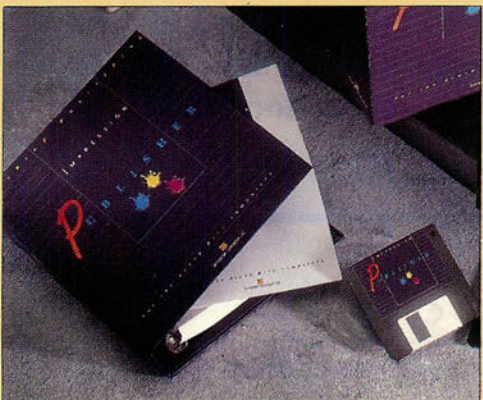
Besides regulars like *Serenade*, *Topographer* and *Rhythm-Bed*, Clares will have *Rhapsody 3* and *ProArtisan 2*. Also look out for the new graphing package *Plot*, *NightSky* and hopefully the long-awaited spreadsheet *Schema 2*.

COLTON SOFTWARE (74)

From the company who brought you *Pipedream*, things will be going whizz-bang! on the Colton Software stand with the launch of *FireWorkz*, the new hybrid application produced from the *Wordz* word processor and *Resultz* spreadsheet.

COMPUTER CONCEPTS (67/68)

New versions of *Impression* and *Impression Junior*, to be called *Impression Publisher* and *Style* respectively, head a long list of new products from CC. These include the *AudioWorks*



sound editor, *WordWorks* dictionary and thesaurus plus CD-Rom versions of *ArtWorks*, complete with masses of clip art. Another attraction will be the new Canon BJC-600 four-colour CYMK printer with *TurboDriver* support. CC will also have partner firm Wild Vision on the stand showing new multimedia hardware.

CUMANA (41A)

Besides the usual Cumana products like the EMU interface system, network solutions and multimedia software, the spotlight will be focussed on Cumana's new low cost CD-Rom systems, starting at £299.

DIGITAL SERVICES (17)

Digital Services has a number of new products at the show. Version 2 of the popular *Squirrel* database will be featured, plus a new Ethernet networking card. Also look out for *Armlock*, a password-based hard disc security system which doesn't need drive partitioning and can protect CMOS Ram data.

ExpLAN (116)

From ExpLAN at the show comes *Architech*, a development of the well-known *Tabs* 3D modelling system which now has fast colour and texture mapping. Complementing this is *Spex*, another three-dimensional modelling software package.

ICON TECHNOLOGY (108)

New versions of *StartWrite*, *Easi-Writer* and *Tech-Writer* will be the centre of attention on Icon's stand. All now have the trendy Risc OS 3D look plus improvements like drag-and-drop editing. Acorn Pocket Books are also to be given away as competition prizes.

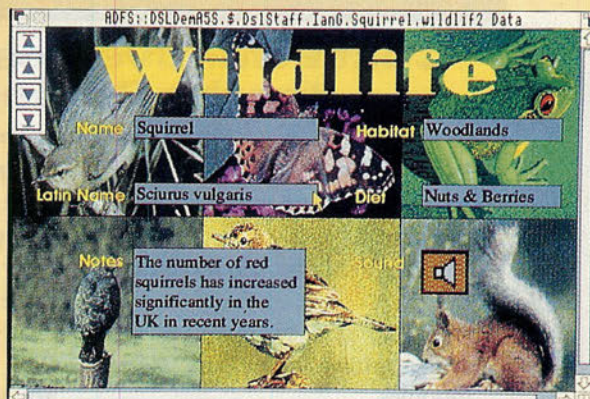
I-CUBED (91)

Ethernet is the name of the game at I-Cubed. A complete range of AUN-compatible Ethernet solutions is offered by I-Cubed and the show will see the debut of 300 metre versions of its Ethernet cards. Several I-Cubed dealers at the show are expected to be linked up via Ethernet.

IFEL (92)

Memory and fast Arm3 upgrades will be the main attraction. The company produces both 25MHz Arm3 upgrades with an FPA option and a 35MHz Arm3.

Show offers will be available and there is a chance that some as-yet unnamed new products could be previewed too.



There are several highlights on the Computer Concepts stand including *Impression Professional* (left) and the BJC-600 printer (shown above).

The latest version of the *Squirrel* database from Digital Services (top) is on stand 17 and impressive 3D modelling software (second from top) can be tried on the Explain stand

NEXUS JUNIOR

Cost Effective Resource Sharing for the Primary School

Four Computers: One Hard Disc

Save Time...

- All your software always instantly available.
- No more lost or broken applications discs.
- No more disc swapping to load fonts, printer drivers or system modules.

Save Money...

ONE THIRD OFF
Educational price
or

NOW ONLY **£399.00**

FREE INSTALLATION AND TRAINING

Nexus Junior

Hard Disc Sharing for Archimedes Computers.

Only £399 for the four computer starter pack*.

Ready to plug in and go.

Fast, easy access to applications software.

No management required.

Ability to share printers.

High level of security.

Fully expandable.

Leasing available.

*Computers not included.

All prices exclude VAT.

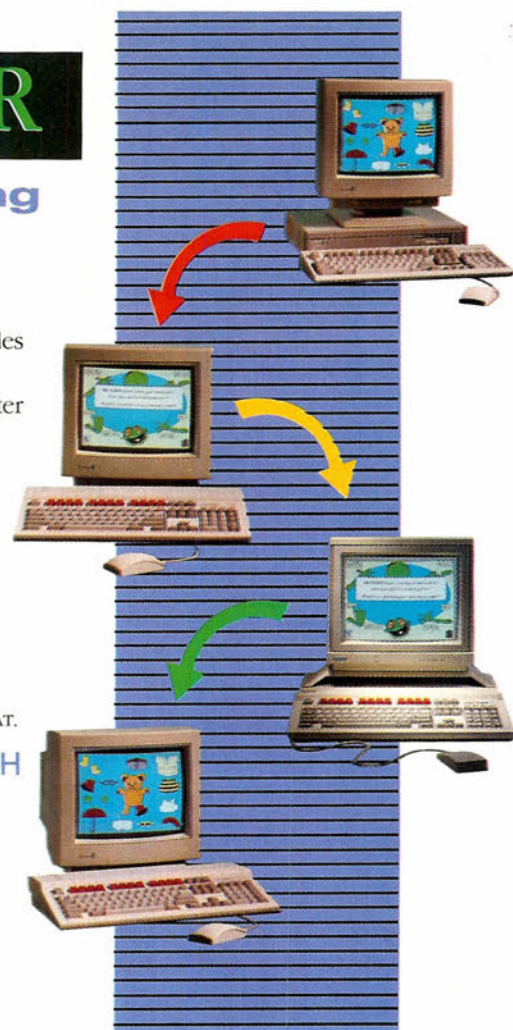
GIVING YOU THE TIME TO TEACH

SJ
RESEARCH

SJ Research Limited

J1 The Paddocks, 347 Cherry Hinton Road,
Cambridge CB1 4DH

Tel: 0223 416715 Fax: 0223 416440



**Start
Write**

**Easi
Writer**

**Tech
Writer**

Announcing a major step forward...

Acorn
WORLD 93

The Icon Technology family of word processors has been made even easier to use.

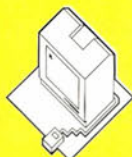
We've added a point-and-click toolbar so you can carry out the most common tasks without using menus. Just click on the tool you want, to Print or Save for example, and the job is done.

As if that isn't enough we've also added 'drag and drop' to simplify editing. Simply select the text or picture you want to move and drag it to its new position in your document.

There's more...

StartWrite can speak. Helpful for children and fun to use. And now you can create footnotes and add sub- and super-scripts to EasiWriter as well as TechWriter documents.

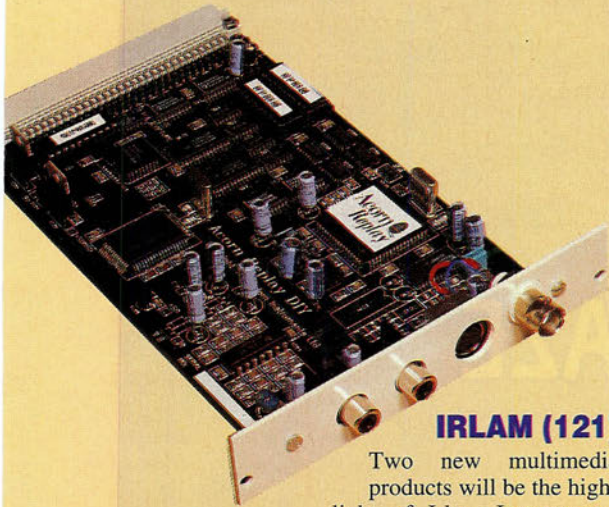
For full details simply contact Mike Glover on 0533 546225.



ICON TECHNOLOGY LTD

5 JARROM STREET • LEICESTER • LE2 7DH • TEL. 0533 546225

Acorn
WORLD 93



IRLAM (121)

Two new multimedia products will be the highlight of Irlam Instruments' stand. A Replay Plus version of the Acorn Replay DIY kit will be at the show offering a number of improved features. Secondly there is a new pro-quality 16-bit DAT and CD-quality sound sampler card featuring a DSP chip for real time effects and compression.

KODAK (79)

The Photo CD imaging standard is shown for the first time on the Kodak stand which puts ordinary 35mm slides and prints on CD-Rom in high resolution form. Special deals on the stand.



LOOK SYSTEMS (23)

The choice of Risc OS fonts has never been so comprehensive. The arrival of yet another new range of fonts, especially as they are priced so competitively, is well worth a look.

LONGMAN LOGOTRON (72)

Longman Logotron will be showing the latest version of the *Eureka* spreadsheet along with its wide range of educational titles: *Talking Pen-down*, for example.

Sure to attract attention will be a new *Landmarks* module which explores the world of the Tudors and the Stuarts back in the 17th century.

S-Base 2 will be previewed at the show and there will also be a new version of *Pinpoint*.

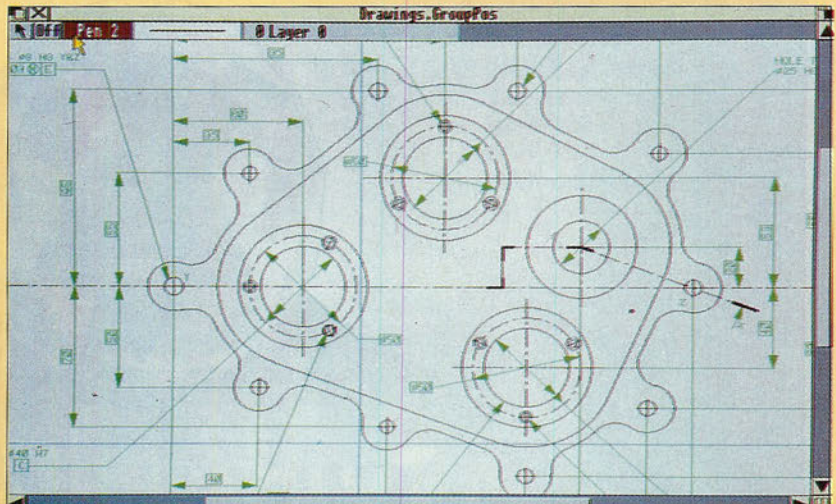
For bargain hunters, Longman Logotron says that 20% discounts on orders taken at the show will be available.

MATT BLACK (56a)

Clip art of all shapes and sizes is Matt Black's speciality. Look out for the latest collections of photographic images and Photo CD developments too.

MINERVA (42)

All of the familiar titles: *CADet*, the *Prime* series and so on, will be at the show as well as some new ones. *Prime Mover* is a new sprite animation package featur-



ing a simple front end and the Sound Track *Keyboard Trainer* is a fun-to-use Midi-based music keyboard trainer aimed at novices.

OAK (81)

Oak Solutions is a big player in the schools networking market, but at Acorn World the emphasis will be on educational software and consumer products. *Rephorm*, the new morphing package, will be the main Oak attraction, alongside usual Oak products like Oak Recorder II and *Genesis Plus*.

NCS (48)

Norwich Computer Services will be at the show with a new pocket sized removable Syquest hard drive system, plus various other software and hardware promotions.

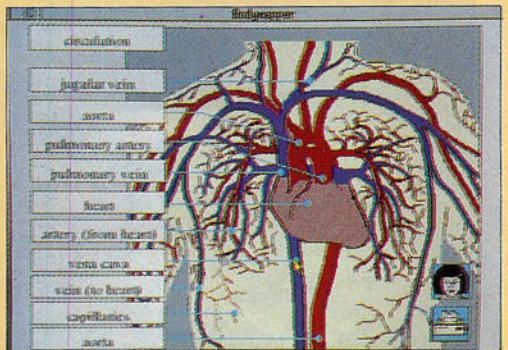
PANDA DISCS (59)

Crossword fans shouldn't miss out stand 59, which is where they will find *XWord*, a comprehensive Risc OS crossword solver, compiler and designer package.

PEN AND THINK (107)

This is the family-run educational software house based in Torquay. Programmers John and Chris are still teaching in schools, so they have a unique insight into the needs of teachers and students alike.

New for the show will be a 'pro' version of Pen and Think's Schools database system.



Kodak is sure to be a major attraction with the launch of Photo CD shown on the left.

Matt Black (top) is offering a range of clip art including some in CD format.

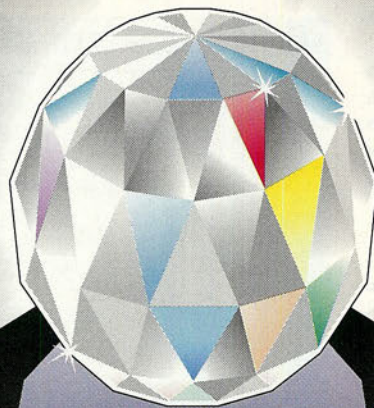
For CAD users, Cadet (second from top) offers an educational perspective.

Finally, directly above, Oak will be showing popular packages such as *Genesis Plus* alongside its newer releases.

The Crystal Maze is a Chatsworth Television production
for Channel 4 based on ideas by Jacques Antoine © 1990

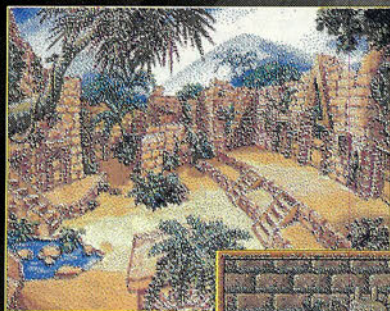
THE CRYSTAL MAZE

The Crystal Maze is
available exclusively
for Acorn 32 bit computers
and will be launched at
the Acorn World Show.
Take up the challenge
on STAND 35.



The Crystal Maze is a
must for everyone from
lovers of mind-bending
puzzles to joystick-frenzy
enthusiasts'
Acorn Computing
October 1993

Into the Aztec zone.....



Now you can play TV's
No.1 Adventure Game



Try your hand at a game
of skill

The final challenge!



The Ocean zone contains new
challenges



£39.95 (inc VAT) from
Sherston Software
Swan Barton, Sherston,
Malmesbury,
Wiltshire SN16 0LH
Tel 0666 840433
Fax 0666 840048

Please send me ☐ copy of The Crystal Maze® at £39.95 inc VAT

Name Visa/Access:
Address
 Exp. Date:
 Post Code Signed

PINEAPPLE (40)

Colour digitisers and expansion adapter cards will be found on the Pineapple stand along with anti-virus software like *Killer* and *VProtect*.

RHEINGOLD ENTERPRISES (59)

Rheingold's two main products are the *TextAid* text-processing utility and *Vigil*, which is a multi-tasking monitor/debugger for programmers. The show will be *Vigil*'s public debut.

RISC DEVELOPMENTS (77a)

Risc Developments will be showing a new high density floppy disc upgrade for older Archimedes models. There will also be a new tape streamer which connects via the parallel port.

On the software side you can see the *Sleuth* optical character recognition system, a new version of *Ovation* DTP and an updated *Hearsay II* comms package. Debuting at the show will be *Easy C* priced at £49.

**SHERSTON SOFTWARE (35)**

Sherston has a range of well-known educational titles on show, as well as some new releases such as the *Crystal Maze*.

SJ RESEARCH (78/123)

Schools looking for an inexpensive and reliable networking/hard disc sharing system will be pleased to hear that SJ Research expects its promised Nexus Junior system will be ready and finished for the show.

Nexus Junior offers a simple four-station network for just £399.

SOFTWARE BARGAINS (6)

In fact you will probably see a different banner on Stand 6, namely Vantage One Direct – the new name which replaces Software Bargains and Mercury Games. Part of the MicroPower group, expect to find some keen software pricing.

SPACETECH (38)

Spacetechn will be showing its collection of awe-inspiring software which illustrates the night sky and the objects lurking up there.

STATE MACHINE (93)

For the latest developments in the G-series graphics accelerator cards, head for stand 93. Undoubtedly you will find lots of very big monitors running dazzling demonstrations, including full-speed *Replay* movies in higher resolutions and with more colours than you might be used to.

STALLION SOFTWARE (56A)

An updated version of the *Almanac* desktop diary/organiser system will be the highlight at Stallion software's stand. *Almanac 2* has a new up-to-date Risc OS look and better import/export facilities. Other new products at the show will include new language versions of the *Lexicon* language learning tool and *Assembler Help* for Arm coders.

EFF (85)

The Electronic Font Foundry offers what is probably the widest range of Risc OS outline fonts. Both original Risc OS 2 and revised Risc OS 3 fonts will be available, along with some special show deals.

THE SCIENCE MUSEUM (95)

The Science Museum uses around 40 Beebs and ten Archimedes for information displays and control purposes. At Acorn World visitors will probably get a look at the Archimedes-driven Science Box contemporary science interactive display system which uses touch screens to reveal the secrets of DNA fingerprinting, the ozone hole and nanotechnology. If you see a scale model airship floating around the show, it took off from the Science Museum stand!

THE SERIAL PORT (52)

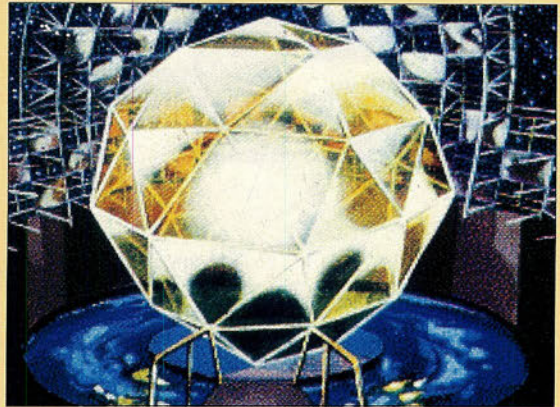
The Serial Port has taken over the Arxe Systems SCSI and HD floppy interfaces so these will be spotlighted on the stand. All the usual comms solutions – modems, high speed serial cards and *ARCterm 7* – will be there. The *Sorcerer* source code editing package is now in the catalogue and an interesting DSP controller card will be shown.

WILD VISION (67/68)

Wild Vision, Computer Concepts' partner company specialising in hardware design and production, will have three new products. Eagle M2 is a new multimedia card which is *Replay* compatible and offers wide-ranging audio compatibility as well as a video digitising function and is designed to work with new CC developments like *AudioWorks*. Other new products are the Lark 16-bit sound sampler, bundled with *AudioWorks* and finally the Chroma500 digital genlock card. Special show prices are promised.

WYDDFA SOFTWARE (94)

Talking Stories will be the latest product: a storytelling application. Also from Wyddfa are *The Spoken Word* and *Talking Pictures*. Welsh versions are available too.



Sleuth (shown on the left) is at present the leading optical recognition package, on the Risc Developments stand.

Leading education supplier, Sherston Software, will have a new release, the *Crystal Maze* on its stand (shown above top).

The Science Museum (above) should add a touch of diversity to the show, with its innovative display techniques using Acorn technology.

Get your show guide at the Acorn World Show entrance for a complete up to date show plan.

SHOW

Step inside the Acorn World games arcade for an exciting games line-up

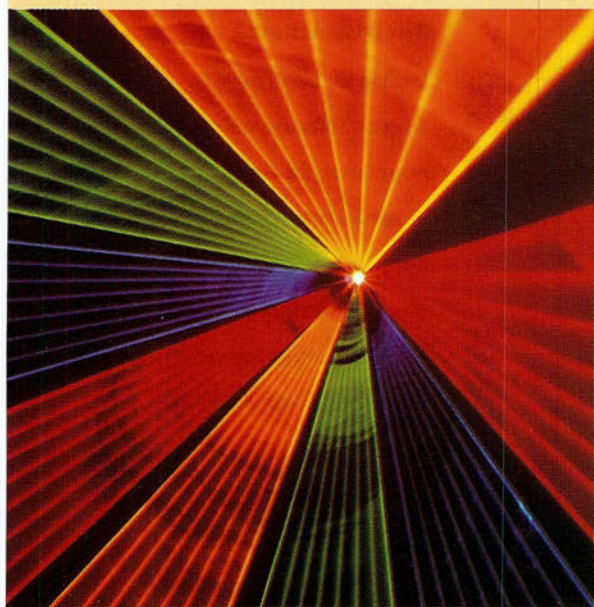
We've got Vikings, demons, killers, racing cars, space ships, a sorcerer called Simon and even a smooth-mannered goldfish with a Walther PPK and a mission. And that's only the new stuff.

These are exciting times in the Acorn games world. More and more games from the cream of the 16-bit scene are being ported across to 32-bit format and at this show several of the best are being launched, including *Heimdall* and *James Pond 2: Robocod*.

Meanwhile, companies like The Fourth Dimension and Matt Black continue to produce good value games designed exclusively for the Acorn range. You can play all the latest releases and demos of games that aren't completed yet.

Laser Show

The centrepiece of the show will be a huge, completely-enclosed space ship. Inside, a battery of Acorn computers will be running a selection of the best games for punters to play test and the whole craft is to be filled with a mindblowing light show, generated by a full-colour, water-cooled, full tilt, computer-controlled laser. (See the Moxon interview for the inside story). You



won't be able to miss this one – if the space ship doesn't blow your mind, the lasers will and if you survive both, you can enter Acorn's games competition. Check out the space ship for details.

Sam Greenhill

THE FOURTH DIMENSION

If *Killer* isn't the most popular thing on this stand then I'm a blue banana and I'll announce it so (though, obviously I'd cop out and whisper it softly if it came to the crunch.) *Killer* is the totally wired part of Fourth Dimension's latest hit, *Stunt Racer 2000*, where two players drive racing cars around the most manic track in the history the world. Stunt isn't the word, you'd need to be Mad Max on acid to take this track seriously. Fortunately, you needn't take it that seriously; Fourth Dimension will be linking two Acorns together on the stand for punters to burn up the *Killer* track side by side and everyone will watch as they start confidently along an innocent-looking straight road, then

wonder where the hell it went. Onlookers can then laugh as the poor devils realise – too late – that they're half way round a very thin, very tall, loop-the-loop... there's a jump at the bottom and nothing they can do about it!

Other parts of the *Killer* complex just get so utterly weird that you begin to wonder if you AREN'T taking it too seriously. Also, look out for a surprise sequel to the popular isometric arcade adventure, *Pandora's Box*.

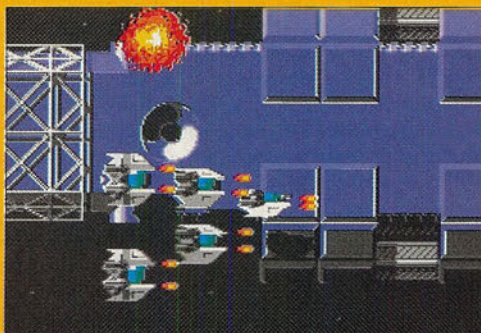


TBA SOFTWARE

There's nothing 'to be announced' about this one: here's the lowdown... TBA, still revelling in the success of its shoot-em-up maze game, *Axis*, which stormed the Acorn games world last spring, is all set to release *Psycho Squadron* at the World of Acorn show. Although it is of the horizontally-scrolling variety (*Xenon 2* is vertically), *Psycho* is two screens high, so there is room for

vertical manoeuvre.

The usual array of power-ups avail themselves for collection but TBA deliberately hasn't gone over the top with bolt-ons, so skill is still required! There are, however, extra 'wingpersons', bonus rounds plus a training programme for new pilots.



**NEW
ON THIS STAND**
PSYCHO SQUADRON
NINTENDO
PRO-PAD



GAMES

with an amazing lightshow and fifteen new releases to try out

GAMESWARE

Although new games label Gamesware was officially launched at the Live 93 show last month, the World of Acorn show will be its first exposure to most Acorn users and the first chance to get your mitts on the classic shoot-em-up *Xenon 2*. But Gamesware is going for it in a big way and will have no less than seven new products on the stand.

The conversion of *James Pond 2: RoboCod* will bring us more fishy goings-on in the under(water)world as secret agent Pond splashes

and dashes his way through 85 watery levels, rearranging nasties' faces and shakin' not stirrin' the end-of-level baddies. Gamesware has also rehased two average games from recently-collapsed games house, Software 42 - *Fred* and *Cycloids* (hopefully, they'll be made more exciting) and rewritten the cheating utility *Games Wizard*, to make it easier to use. Also, watch out for the demo of *Simon the Sorcerer*, the first, fully, funny interactive arcade-adventure game.

NEW ON THIS STAND

SIMON THE SORCERER
POWER PAD • CYCLOIDS
JAMES POND 2 • FRED
XENON 2 • ROBOCOD
GAMES WIZARD



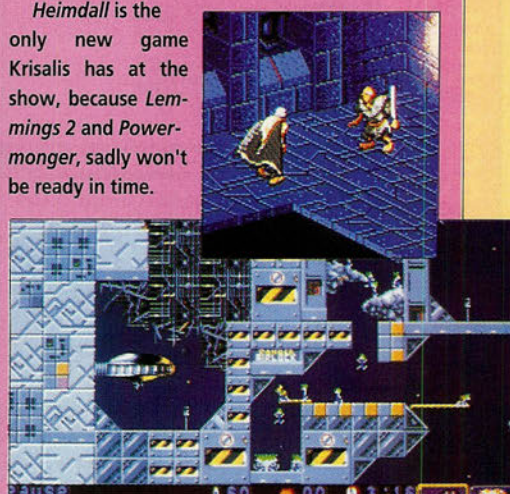
KRISALIS

Very hairy men with swords, horned hats and pints of Skol, all looking for a hammer belonging to some bloke called Thor. Why? Many reasons: because Thor lost it, because that's the sort of thing you did if you were a Viking and because when Thor says 'find my hammer', you find it. So off set you, as Viking warrior extraordinaire, to search for it and also to find Odin's sword and Frey's spear. You see what happens? One muscle-bound twerp gets you to look for his hammer and suddenly all the other silly-named Vikings get wind of it and conveniently lose their swords and spears.

Heimdall is the only new game Krisalis has at the show, because *Lemmings 2* and *Power-monger*, sadly won't be ready in time.

NEW ON THIS STAND

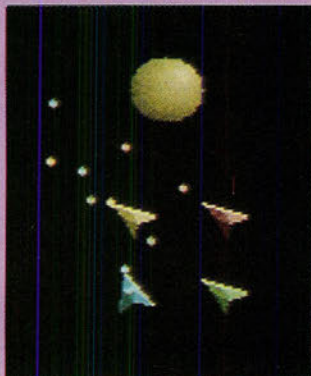
HEIMDALL



MATT BLACK

If you're one of those people that didn't manage to get the mortgage details sorted with the bank manager in time for the show, then Matt Black and its bundle of budget games might come as a great relief to you... and your wallet.

Matt Black describes its latest budget release (it'll set you back a tenner) charmingly titled *Blood Sport*, as 'a brand new, action packed martial arts game', for one or two players. The mission ain't complicated: just beat the hell out of all and sundry



to win. However, you will soon learn that the bad guys each have 'a unique fighting style and a special power', in other words they've got the edge on you when it comes to equipment and training.

To get round this: just beat the hell out of them. Check it out on Matt Black's stand.

Also, don't miss *Spheres of Chaos*, the best game Matt Black ever produced. It's an addictive blast-em-up space game that's dead simple and simple to be dead. It is also the only game that up to four can play at once.

NEW ON THIS STAND

BLOOD SPORT

LINGENUITY

SPECIAL MULTI- MEDIA OFFER

RAPIDO 16-BIT SCSI HARD DRIVE PACKS

Suitable for A300/A400, A5000, A3000, NOT A3010/3020, A4000

Drives are externally cased
SCSI cards are 1/2 width Eurocard style
Surface mounted 16-bit SCSI technology
Software includes CDFS

85Mb Drive + SCSI Card	£345
127Mb Drive + SCSI Card	£395
170Mb Drive + SCSI Card	£425
240Mb Drive + SCSI Card	£535
560Mb Drive + SCSI Card	£1025
Interface card only	£149

EXTERNAL SCSI HARD DRIVE PACKS

Suitable for all Acorn RISC OS Computers
Drives are externally cased. Software includes CDFS

85Mb Drive + SCSI Card	£295
127Mb Drive + SCSI Card	£345
170Mb Drive + SCSI Card	£375
240Mb Drive + SCSI Card	£485
560Mb Drive + SCSI Card	£975
Interface card only	£99

INTERNAL SCSI HARD DRIVE PACKS

Suitable for A300/A400 Series, A5000
NOT A3000, A3010/3020, A4000

Drives are for internal fitting
SCSI cards are 1/2 width Eurocard style
Software includes CDFS

85Mb Drive + SCSI Card	£245
127Mb Drive + SCSI Card	£295
170Mb Drive + SCSI Card	£325
240Mb Drive + SCSI Card	£435
560Mb Drive + SCSI Card	£925
Interface card only	£99

CD ROM PACKS

Suitable for all Acorn RISC OS Computers
CD ROM drives are externally cased
Toshiba 3301 & 3401

Standard Drive + SCSI Card	£449
Double Speed Drive + SCSI Card	£549
Standard Drive no SCSI Card	£380
Double Speed Drive no SCSI Card	£480
Interface card only	£99

BARE DRIVES SCSI

Quantum & Micropolis. Other sizes are available.
Quantum - 2 year warranty most models
Micropolis - 5 year warranty most models
Please call as these prices vary from day to day.

85Mb	£199
127Mb	£245
170Mb	£275
240Mb	£385
560Mb	£875

DRIVE CASES

Suitable for 3.5" & 5.25" half height drives
External Hard Drive Casing (incl. PSU, fan & cables) £89

SCSI SHARE

SCSI SHARE enables up to 6 Acorn computers to SHARE one hard drive, one CD ROM drive and one or more printers with maximum performance and minimum management.

Applications are LOCKED against deletion/tampering etc. Impression loads simultaneously on 6 A3000s in 4.5 secs. Prices include delivery, installation, training and support. Please call for an information pack.

3 Unit SCSI share	£825
4 Unit SCSI share	£999
5 Unit SCSI share	£1175
6 Unit SCSI share	£1349
Larger Drive (Std 127Mb)	£35/10Mb
CD Share (per cluster)	£100
PrintShare (Site Licence)	£100
NetShare Gateway (Site Licence)	£POA

CABLE NEWS (Please call for demo disc)

Multimedia presentation and communication package. Create 'slides' with backgrounds and frames - text & graphics. Combine slides to create presentations. Can be used with video.

Single User Pack	£149
Cluster Licence Pack (10 Users)	£420
Site Licence Pack (30 Users)	£676
Commercial Distribution Licence	£575

PRESENTER GTi (Please call for demo disc)

Graphing package. Advanced features include:
Regression Line, Scattergram, Logarithmic Scaling Axis, Line & Curve of Best Fit.

Single User Pack	£62.95
Cluster Licence Pack (10 Users)	£170
Site Licence Pack (30 Users)	£280

REELAX

Printer Spooler. Takes print files from hard disc and spools in background. Returns control of computer approx. 30% faster.

Single User Pack	£39
Site Licence	£99

AIM II

Application using powerful image processing routines
100 Page Manual + Aim S/W (P.D.) £25

Prices do not include VAT, no VAT on AIM II.
Delivery & Packing: £4.00 - recorded 1st class post (software only) £10.00 - for multiple product orders and hardware

**Lingenuity
Multimedia Pack -**
comprises CD ROM
Drive (photo-CD
Compatible),
127mb hard drive,
SCSI interface and
cables. Suitable for all
RISC OS computers.

ONLY

£599

+ V A T

SEE US ON STAND 49

**Acorn
WORLD**

93

SPONSORED BY
BBC ACORN USER

HOTLINE 098 685 476 FAX 098 685 460

Getting I.T. Right

LINGENUITY
A DIVISION OF LINDIS INTERNATIONAL

Wood Farm Linstead Magna Halesworth Suffolk IP19 0DU
Lingenuity SCSI Interfaces and SCSI Software are © J.W. Ballance

Walk around THE WORLD

Acorn World will be an educational show, but it could be an education of a different type if you turn up unprepared. Here's your teachers' guide to survival

Precision planning, that's what you need to tackle an event like Acorn World. Although it may be smaller than some shows, the difference is that every single stand has something to interest the Acorn education enthusiast, so time spent poring over the *Acorn User* preview at home will be more than repaid when you finally arrive at Wembley.

There is a lot to see, so the first thing to do is establish where the catering and toilet facilities are. Compare their location with the ones marked on the map in the show guide and this will help with your general orientation.

My personal approach is not to start at A and work my way through to Z. I prefer to reorganise the exhibitors under my own headings and then zigzag backwards and forward, ticking off one group of stands before moving on to another.

So, for example, because I am interested in creating my own multimedia applications this will be one of my trails. Start at Oak Solutions (stand 81) to check out *Genesis Plus*. Then I'll head off to Irlam (stand 121) to see the latest version of *Replay DIY*, finishing up at Kodak (stand 79) for an in-depth look at *Photo CD*.

Desktop publishing is another of my pet subjects, so when I'm in DTP mode I'll be popping in to see Computer Concepts (stand 67) to see *Impression Style*, and then on to Risc Developments (stand 77a) for the latest version of *Ovation*. Acorn also has an applications area dedicated to DTP, so that will be another port of call. You get the idea anyway.

Now some may say that this approach is particularly heavy on shoe leather and will quickly deplete energy levels to the point of virtual collapse, but I maintain that it allows me to focus on one specific topic, get to grips with it, and then move on. Otherwise I find I tend to

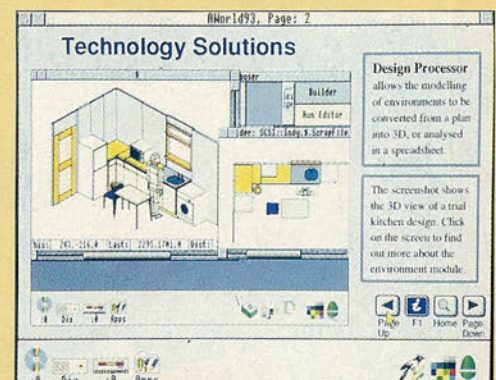


wander around aimlessly and then have nothing to report to the deputy head on Monday morning.

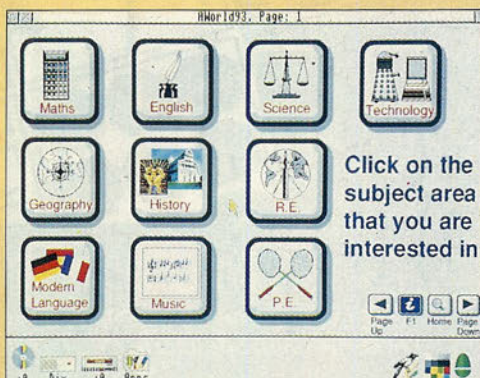
Where energy can be conserved, however, is in what you carry around with you. Travel light and just say no to the proffered literature is my advice. If you doubt your ability to repulse the cohorts of marketing hired hands, the night before your visit to the show, try the following routine. Stand in front of the mirror and practise useful phrases such as 'Thank you, I've already got one of those' and 'If anyone else tries to stuff a bit of paper into my hand I'm going to kick them'. I'm sure you can come up with a few of your own.

It's cross-curricular rather than related to a particular subject, but before you wilt, do pay a visit to the education area. Here you will find interactive displays on IT for the primary, secondary and special needs sectors. It is promised that you will be able to interrogate the technology with queries such as 'Where can I find Key Stage 1 spelling programs?' or 'Who can give me advice on touchscreens?'

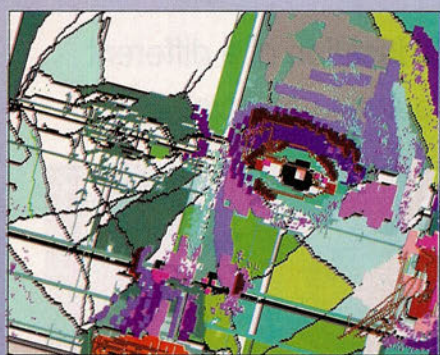
Acorn World provides a perfect opportunity to see for yourself all those products your colleagues have raved over or you've read. Enjoy it, but make sure you make the most of it.



It might not look educational, but in the education area you'll be able to see some petrified pupils abseil down a wall, while their vital signs are measured by an Acorn machine. And as if that's not interesting enough, you can ask the interactive computer displays all sorts of questions about IT.



REVELATION ImagePro



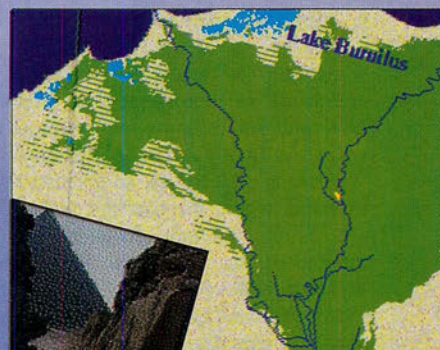
‘Revelation ImagePro contains just about every feature that you could imagine to aid in the preparation of pictures and enhancement of existing images.’

‘At an amateur or professional level, ImagePro suits the needs of both.’

Peter Clements, Archimedes World

‘If you want this kind of package, then ImagePro is the one to buy... It's a superbly professional application.’

Richard Hallas, RISC User



STATE OF THE ART PAINT AND IMAGE PROCESSING



Create sprites in 2, 4, 16 or 256 colour modes (including new standard palette high-resolution modes now supported by third-party graphics cards).

Tools include user defined brushes, sprays, bristle and other painting effects.

Over 100,000 dithered colours under RISC OS 3.

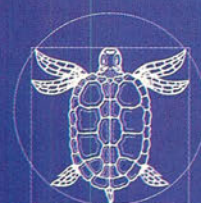
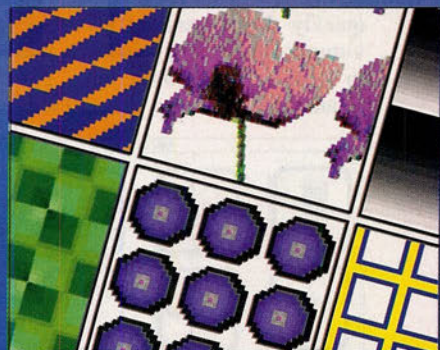
Fully editable graduated blends giving antialiased effects, directional graduations and image superimposition.

Variable sensitivity tracing, blurring, sharpening, dithering and mosaic effects.

Control over hue, saturation and contrast on whole images, selected colours or selected areas.

Internal colour processing at 24 bits per pixel (dithered onto standard 8 bit sprite).

Tint, RGB and CMYK colour models.



LONGMAN
LOGOTRON

Revelation ImagePro — £139 Single User pack
£400 Educational Site Licence
£600 Business Site Licence (per 16 users).

124 Cambridge Science Park, Milton Road, Cambridge CB4 4ZS
Tel: (0223) 425558 Fax: (0223) 425349

WIN EVERYTHING

you ever wanted



The prizes

Animator	Iota
ArcTerm 7	The Serial Port
Artworks	CC
Axis	TBA Software
Battle Chess	Krisalis
CADet	Minerva
EasiWriter	Icon Tech
Event	Explan
Fireworkz	Colton
FPA/Arm	Simtec
KidPix	ESM
Killer sub	Pineapple
Morpheus	Oregan
Noddy's Playtime	Jumping Bean
Notate	Longman
	Logotron
Oak Recorder 2	Oak Solutions
Orrery	Spacetech
Outline fonts	EFF
Ovation	Risc Dvlpmnts
ProArtisan 2	Clares
ProPad	CU
Prophet	Apricote
Replay DIY	Irlam
Revolution	
CD-Rom drive	Morley
ScanLight Video	WildVision
Stunt Racer 2000	4th
	Dimension
Crystal Maze	Sherston
Spoken Word	Wyddfa
Word Bank	Topologika
Zool	Gremlin

You might own the most powerful home computer the world has ever seen, but have you the add-ons to match? Enter the phenomenal *Acorn User* show competition, and you can win a fantastic collection to turn your machine into the most powerful piece of kit since Chernobyl.

Every category under the sun is covered. For graphics fans we've got everything you need to become the next Picasso: *Animator*, *Artworks*, *CADet*, *KidPix*, *Morpheus*, and *ProArtisan 2*.

On education we've *Noddy's Playtime*, *The Spoken Word* and *Word Bank*, and you can look to the skies with *Orrery*. DTP and word processing is covered by *Ovation*, *Fireworkz*, *EasiWriter*, and £200 worth of outline fonts. Plus mega-games *Axis*, *Stunt Racer 2000*, *Crys-*

al Maze, *Zool* and *Battle Chess*.

Expanding your machine is now no longer a problem, with Simtec's Arm3 upgrade complete with fitted FPA. For games players there's a ProPad joystick, and for graphics users there's a Replay DIY card and Wild Vision's ScanLight Video card. Finally on the hardware front, there's Morley's new Revolution CD-Rom drive, ready for PhotoCD.

Musical boffs are catered for with *Notate*, and *Oak Recorder 2*, and if comms is your thing, get connected with *ArcTerm 7*. On the business side we have the *Event* diary and the *Prophet* accounting package, and if you're worried about virus attack (aren't we all), there's a year's subscription to Pineapple's anti-virus scheme.

Entry details

If you visit the *Acorn User* stand at the show you will see these goodies piled up. So how can you get your hands on them? Simple: just become a regular reader of *Acorn User*.

The competition is open to anyone who takes out or renews a subscription during the three days of the show.

The NEW Custom McCoy for 1993

Includes 4 BRAND NEW Top Game Additions....

The following Acorn software is compatible with all A3000s, A3010s, A3020s, A4000s, A5000s and ALL Archimedes



ARcticate £25.95



Apocalypse £29.95



ARctist £25.95



The Olympics £19.95



Inertia £19.95

**Choose ANY Four
Of These 19 Top Products
For ONLY £34.50!
Less Than £9 Each!!**



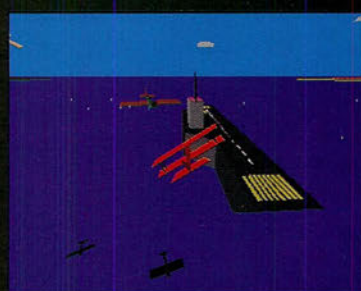
Drop Ship £19.95



Powerband £25.95



GRIEVOUS BODILY 'ARM £25.95



CHOCKS AWAY Mk2 Version £25.95



Man-At-Arms £19.95



White Magic 1 or 2 £19.95



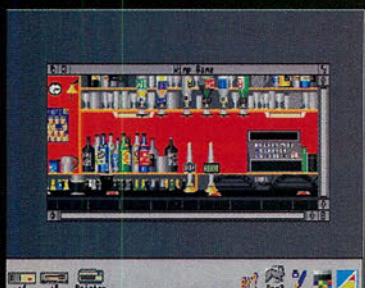
X-FIRE £25.95



CATACLYSM £25.95



Holed Out £19.95



The Wimp Game £19.95

**Exclusive Mail Order Offer
For a Limited Period Only**

Unbeatable Value

The Real McCoy compilations are terrific value for money. Unfortunately if you've already got 1 or 2 of the products you miss out. Now that's all changed. You can choose ANY 4 from these 19 great titles for yourself!! Each such "Custom McCoy" will be individually packaged in 1 attractive video-style box complete with ALL original discs and manuals.

HOW TO ORDER....

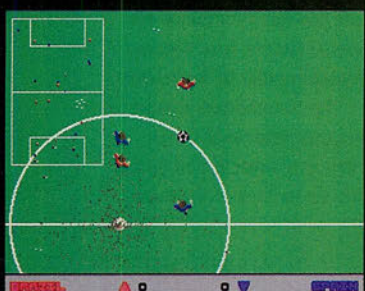
Simply send us a quick letter or give us a ring telling us the 4 products you would like, your name and address, and payment via cheque, postal order or ACCESS or VISA card details.

The Fourth Dimension, 1 Percy Street, Sheffield, S3 8AU.

Tel. (0742) 769950 or 700661.



Nevryon £19.95



GAME SHOW

You wait patiently for eons of time, tapping your feet, watching your hair grow, and then three come along at once. Sound familiar? No, not the number 19 bus this time, but joypads, those cool relations to joysticks, which have suddenly mushroomed all over the Acorn games scene.

Here is a quick round up of the three rivals from CU, TBA and Gamesware. Each has six fire buttons and a four-direction control pad and plugs into the printer port.

All three companies are toying with the idea of 'executive' versions that wouldn't leave your poor old printer feeling disconnected. Gamesware is offering a free game with every sale of its Power Pad.

Meanwhile new software house Gamesware, that brought *Xenon 2* to the Acorn format and has *RoboCod* floating in the wings, is growing fast and *Simon the Sorcerer* is the next high-powered release. See our preview of *RoboCod* below and take a peek at work-in progress on *Simon the Sorcerer* on page 71.

Sam Greenhill

Powermonger preview



How would you like to be king of a large desert island populated by a few hundred natives? In *Powermonger*, another Krisalis conversion for Christmas, there's only one thing stopping you: the natives don't appreciate your upwardly mobile aspirations. The task in hand, then, is to beat some sense into these people by raiding towns and villages with the small band of loyal soldiers you were marooned with.

Once enough people have seen the wonder of your ways they make you king of the island. Challenge over with, you can then move on to the next island. Sounds simple, doesn't it, but *Powermonger* is actually incredibly deep and complex. It ain't all violence; you can watch your people grow crops, tend cattle, herd sheep and all sorts, or set your village the task of inventing a new weapon. They'll need raw materials, etc, etc, and before you know it, being king is not as easy as you thought. I can't wait for the conversion.

Cheats

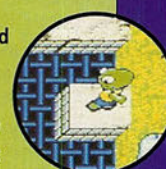
The Last Ninja

There's a built-in cheat for this classic oriental beat-em-up that can be activated by pausing the game and holding down the keys LV426, according to Paul Clinton of Northallerton in Yorkshire. This done, try using the function keys F5-F9 and F11 while paused and F10 and F12 during the game, for a variety of cheats and utilities. (Avoid F8 if you get stuck - this saves a screen to disc.) Thanks Paul.



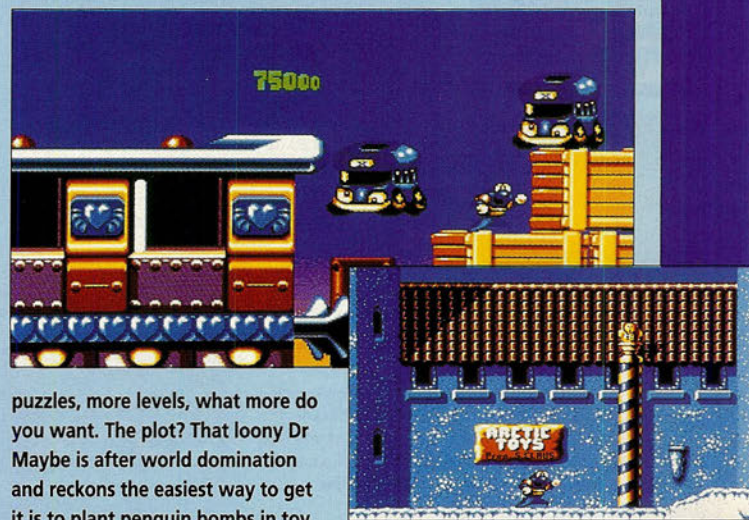
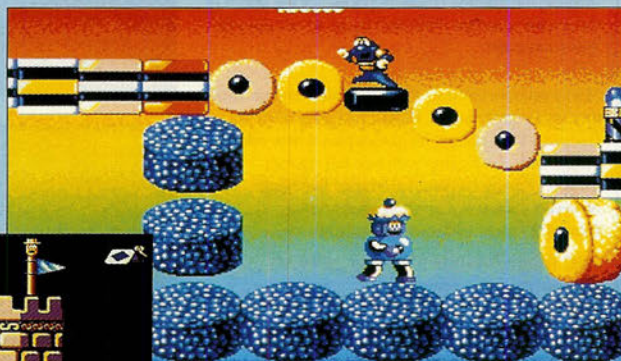
Ego

The manic lizard puzzle game *Ego*, from Superior, has a cheat mode too and we know of it thanks to a man from Bedford called The Count. Try BLACK-CAT to give Repton 10 lives, a peak at the final picture and a level-skip, activated by Ctrl-C.



Part fish, part 2

By the time this goes to press, the latest conversion from Gamesware, *RoboCod*, will be finished and the intrepid underwater spy, James Pond, eager to get cracking on the watery bad guys. We had a sneak peak at a nearly complete version and it's looking good. So what's it got that the original *James Pond* never had? More colours, more



puzzles, more levels, what more do you want. The plot? That loony Dr Maybe is after world domination and reckons the easiest way to get it is to plant penguin bombs in toy factories at the North Pole (there's logic there somewhere...). In his Turbo Tub, agent Pond swims off on his most dangerous mission yet: to save the toys. *RoboCod* has over 2500 screens across eight levels.

SUPERIOR SOFTWARE

ACORN A3000, A3010, A3020, A4000, A5000 & ARCHIMEDES

REPTON 3 - FOUR GAME COMPILATION

Four of the most popular strategy games ever produced for Acorn computers in one great value-for-money package. **Repton 3, Around The World In 40 Screens, The Life Of Repton** and **Repton Thru Time** - with choice of four tunes and a position Save/Recall facility, plus easy-to-use screen and character design and editing facilities.

£24.95 (inc VAT)



TECHNODREAM

At last, the action-packed sequel which everyone has been waiting for! Now, in addition to a 1 player option, you can choose to have 2 players simultaneously. Now, in addition to horizontal parallax scrolling, there is vertical scrolling to give a much enlarged playing area.

There are 18 increasingly fiendish stages, with brilliant arcade-quality graphics and massive animated sprites, plus digitised sound effects and 6 atmospheric pieces of stereo music. Control by keyboard or joysticks (Acorn A3010 or RTFM).

"Technodream's action gets so fast and furious the screen looks like an abstract painting. A highly polished product and well worth the asking price of £25."

...BBC Acorn User (May 93)

£24.95 (inc VAT)



PLAY IT AGAIN SAM 1

Four top quality, classic games...

...for the price of one!

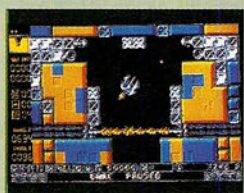
Conqueror - The classic and highly realistic tank simulation game. Control up to 16 German, American or Russian tanks from World War 2. Arcade, Attrition or Strategy games.

Rotor - The widely praised strategy and action game. Manoeuvre the Rotor in 18 deadly missions into enemy fortresses. Destroy their defences as you steal ammunition.

No Excuses - Fifty levels of nerve-tingling excitement as you obliterate the grotesque aliens. Plus an easy-to-use designer to produce your own fiendish levels.

Hostages - Commando action and strategic planning as you rescue the hostages from the besieged Embassy. Realistic graphics and animation.

£24.95 (inc VAT)



THE LAST NINJA

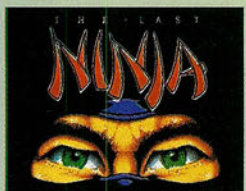
You must use swords, nunchakus and shiraken stars and solve many devious puzzles in over 140 action-packed screens. From the dangerous wastelands and magnificent gardens, to the direst dungeons and the final confrontation in the Inner Sanctum of the Shogun's palace. You cannot fail...you are The Last Ninja.

A graphically brilliant conversion, using the full screen and 256 colours, of one of the most popular and highly rated games ever produced for home computers.

"There's a great big nasty at the end of each level. The solution is never a matter of fighting, it always requires some astute thinking. The Last Ninja is a great game - go silently and leave no witnesses."

...Micro User (Aug. 92)

£24.95 (inc VAT)



SPEECH!

Give your computer a voice with this high quality speech synthesiser, which is both easy to use and very flexible. It can directly speak words you input or text files, or you can use phonetic input to add stress/intonation, speak foreign languages or even sing! An easily modified spelling program is included.

£24.95 (inc VAT)



PLAY IT AGAIN SAM 2

New four game compilation...

...great value-for-money!

Zarch - The classic, programming masterpiece. Pilot your hoverplane, equipped with laser cannon, smart bombs, and homing missiles, over a massive 3-D landscape.

Arcpinball - One of the most realistic and playable pinball simulations ever produced for home computers, with special high resolution graphics and 4 background scenes.

Repton 2 - This brilliant, award-winning mega-game, is now at last available for Acorn 32-bit computers. Have you the skill and cunning to join the elite few who have succeeded?

Master Break - The snooker-style trivia quiz game for 1 to 4 players. Over 2000 text and picture questions on Science & Nature, Sports, Arts, Pop Music, etc.

£24.95 (inc VAT)



EGO: REPTON 4

Ego, the wisest of all the Repton family, now presents the cleverest and most puzzling of all the Repton games. There are a massive thirty levels of play. In each level you have to build up a jigsaw puzzle of a famous personality or place by collecting the pieces scattered around.

However, it's not quite that easy! You have to carefully manoeuvre your way around using various Conveyers and Transporters, and a lot of cunning strategy. You collect the Gems as you move around, whilst dodging the deadly Androids, but what do you do with the Towers, Trees, Grass, Mushrooms and Holes?

"Repton 4 is challenging, good value for money and well graded. What more can I say?"

...Acorn Computing (Jan. 93)

£24.95 (inc VAT)



AIR SUPREMACY

In this unique game, you can swap between air and ground/sea forces as the battle develops. Practise with the biplanes and tanks of 1918 Europe, the fighters and gunboats of the Pacific 1944, and the guided missile jets and desert tanks of the Gulf 1991. Then to 2150 and the final challenge!

"The sense of speed when flying around is excellent. Skimming along the ground in a stealth fighter is particularly fun."

...BBC Acorn User (Dec. 91)

"The ultimate dogfighting game - will take weeks of intensive play to complete - sinks its hooks into you and doesn't let go."

...Archimedes World (Dec. 91)

£24.95 (inc VAT)



BBC MICRO, MASTER 128, MASTER COMPACT & ACORN ELECTRON

Please note that we have a massive range of titles available for these computers, including **ELITE, REVS + REVS 4TRACKS, EXILE, SIM CITY, REPTON INFINITY** and 20 different compilations.

Write to the address below or phone for the prices of these games and an illustrated list of all our titles for these computers.

Now available (on disc only), our latest and greatest four game compilation, **PLAY IT AGAIN SAM 18**.

Featuring three classic hit games plus a new release:

Holed Out - Golf game with two full courses.

E-Type - Racing car simulation over five tracks.

Nevryon - Sideways scrolling shoot-em-up.

Citadel 2 - New 150 screen arcade adventure.

BBC Micro/Master 5 1/4" disc ...£19.95 (inc VAT)

Master Compact 3 1/2" disc£24.95 (inc VAT)



SUPERIOR SOFTWARE

(Superior Software is a trading name of Superior Microcomputing Ltd.)
Dept. V1, P.O. Box 6, Brigg, South Humberside DN20 9NH. Tel: (0652) 658585

PLEASE MAKE CHEQUES
PAYABLE TO "SUPERIOR SOFTWARE."



24 HOUR TELEPHONE

ANSWERING SERVICE FOR ORDERS

OUR GUARANTEE

- All mail orders are despatched by first-class post
- Postage and packing is free
- Discs that are faulty on receipt will be replaced immediately

(This does not affect your statutory rights)

STUNT RACER 2000

Fourth Dimension

Tel: (0742) 700661

Machines: All 32-Bit (2 Mb version has extra music)

Price: £34.95

Most people who've ever been into a decent arcade will have seen a 3D car simulation called *Hard Drivin'*. *Stunt Racer 2000* is basically *Hard Drivin'* for the Arc. It's not, as the box says, 'A game ahead of its time!' but a game about five years behind versions of *Hard*

Drivin' on other machines.

All the features which made it so popular originally are here in abundance (although I do miss the cow which mooed in surprise when you slammed into it) and just like the original, this is the same heady mix of simulation and no-holds-barred racing.

The idea is straightforward: burn round a few circuits in a respectable time to qualify, then take your position at the start for a multi-lap race. The best is with two players when you both make the same race. You are awarded a cash bonus for qualifying in pole position or coming first, second or third in a

01:57.4 R Rich S



Looks like Andrea de Cesaris could pick up a few ideas from these guys

race and you then use this money to improve your car.

A wide range of menu options allows you to customise the game to your taste; for example you can set the level of graphical detail in cars and surroundings to lower levels, trading this off for a higher frame-rate. This is a good idea, and very useful on Arm2

machines, even if it does mean that the cars turn into wedges of virtual cheese.

In the garage you can tinker with gear ratios (all gearboxes are automatic) power curves, engine tuning, tyre grip and so on, providing your car with whatever you can afford. Nitros or Turboboosts can be fitted to provide that little something extra when you're in a tight corner. Qualifying is much easier than racing (though still not easy) and if you don't qualify in pole, you can buy 'masonic help' to improve your placing, or even pay criminals to sabotage a fellow competitor's car.

The game comes with 17 tracks, including two 'Killer' circuits. These consist of a number of areas, linked by teleport gates on which two players can burn rubber while trying to smash each other off cliffs, into walls, over ramps and so on.

The second player can either be on the same machine as player one and displayed using a split screen, or connected from another machine via a serial link cable (not included). This is a rather excellent feature, allowing each of the players a full screen view while competing against a friend.

I can find absolutely nothing wrong with this game, and would advise you to purchase a copy immediately.

Mat Tizard



Drive your competitors off cliffs, into walls and sabotage their cars. Sounds like my drive to work

ALDEBARAN



The game is a real challenge and a visual feast to boot.

AcornUser

Aldebaran has a lot to recommend it. It can take many sessions to play, with a good mix of action and strategy as you juggle projects, gather resources and rescue scientists.

Acorn Computing



Evolution
trading ag



Order Hotline 01041 31 7476531
Industriestr. 12, 3178 Bödingen, Switzerland



£25.50
excl. VAT

NEW Version

WARLOCKS

A massive new arcade game that stands head and shoulders above all so called "competition"
WARLOCKS pushes the Archimedes to new levels of excellence, redefining the state of the Art

FEATURES:

- BREATHTAKING GRAPHICS and ANIMATION
- ATMOSPHERIC MUSIC and SOUNDFX
- FOR THE FIRST TIME EVER 256 colour PARALLAX scrolling running at 50 cycles per second

WARLOCKS is ONLY available from NETWORK 23

To order your copy send a cheque or postal order for £29.99 inc. VAT & P&P, (Overseas add £5.00 for P&P) to:

NETWORK 23, 73 SYLVAN AVENUE, EAST COWES,
ISLE OF WIGHT, PO32 6SJ. Telephone: 0983 290347

NETWORK 23
x x i i i





LEMMINGS 2 TRIBES

Supplier: Krisalis
Tel: (0709) 372290
Price: to be announced

They dig, they build ramps, they float around in the breeze – they also try to pop their little corks at the drop of a joystick. They're lemmings, and they're back.

Lemmings was a ladders-and-ledges game with a difference. That clever, subtly-designed graphic background that we see in the *Marios*, *Zool* or *Sonic* was subverted by the rambling rodents. They proceeded to dig holes in it, bash their way through it, or explode themselves leaving large craters.

Lemmings 2 is more of the same, in spades. You know you've got a job on your hands when you hack your way through the elaborate packaging and find that, this time, the game needs three floppies. You also get a brief, but cute, 72-page novelette that gives

you the background on the game. Unless you are under five, dispose of this and proceed to the game.

You will need the excellent and succinct instruction leaflet. This time, there isn't simply one lot of lemmings, but 12 – the tribes of the title, all with different and highly atmospheric scrolling backgrounds ranging through circus, space, Egyptian and some real oddities. Worse, while before you could give your lemmings any one of eight skills, this time you have no less than 52 possibilities available.

The old ones are all still there, but now you can get the inoffensive little critters to blow large lumps out of the landscape with bazookas and mortars, fire arrows or shoot lines, scoot around on jetpacks, hang gliders or magic carpets, shimmy, slide, ski, stack, scoop and a whole bunch of other stuff that doesn't start with 's'.



With all this, you need all the help you can get, and the game allows you to run through any of the 12 scenarios in practice mode.

It also – a welcome development for anyone bored with having to shuffle a mouse around the mat in double time – assigns the eight skills that are displayed on screen at any one time to the F1 to F8 keys, which saves a lot of flustering. Instead of passwords, this time we've got a very welcome disc load/save routine – always a sign that a game has come of age.

Play isn't just a matter of pointing at a lemming and giving it the requisite skill,



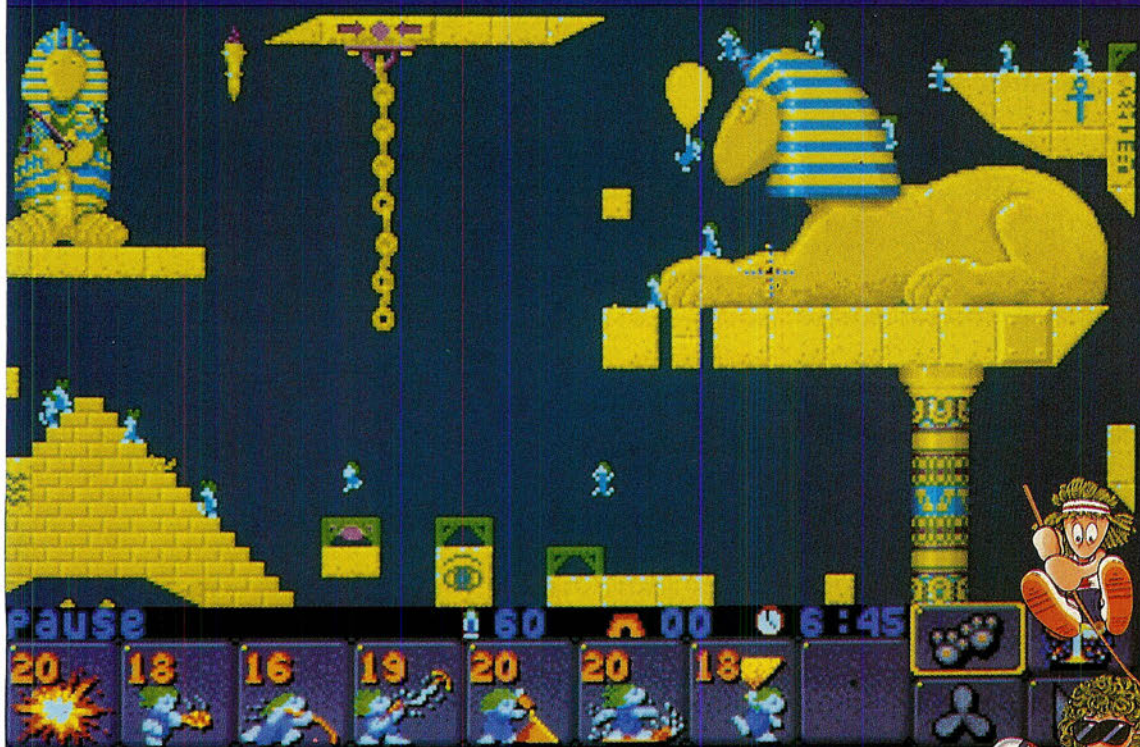
either. Weapons like bazookas and arrows have to be aimed, and parts of the background can be manipulated. My favourite is the catapult from the medieval section that has to be precisely situated to lob a squeaking lemming to safety.

Traps are more various too, which really makes you want to play on; one of the charms of the original was discovering new ways in which the little tykes could be offed. This game, at least in the space section, starts with flame-throwing robots and goes on from there.

Quibbles? Very few. Perhaps the early levels are a little too simple, but saving to disc gets you past those. I miss the small-scale radar display we had in the original, too. And I could have done without that lousy novelette.

But... Nothing really. This is the logical outgrowth of *Lemmings 1*, more and better, and shows every sign of being the blockbuster its successor was. Outstanding.

Josef Koestler



Lemmings: still bent on myriad forms of self-destruction



XENON 2

*...the definitive
shoot 'em up from
the Bitmap Brothers
blasts onto the
Archimedes!*

Includes a 'Bomb The Bass' soundtrack

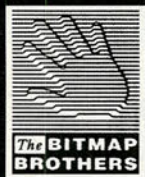


**JOYSTICK
COMPATIBLE**



**MINIMUM
1 MB
RAM
REQUIRED**

**PRICE
£25.99
INC. VAT**



Available from all good Acorn software
stockists or from GamesWare, Unit 26,
The Bartletts, Hamble, Hants SO3 5RD.
Telephone or Fax (0703) 456523.

Visa and Access accepted.



GamesWare is a trading name of Astron Computing Ltd.

SIMON THE SORCERER

Wow! This game is gonna be FUN! It's an 'animated graphic adventure', it's got brilliant, cartoon graphics and it's honestly, genuinely amusing. It stars a cocky cockney called Simon who likes magic tricks and

wears a purple robe and a wizard's hat... over his Levi's 501s of course.

Simon the Sorcerer is being released on all formats (including Acorn) virtually simultaneously and the demo versions have been raved about as the best thing since the Lucasfilm hit 16-bit success, *Monkey Island 2*.

Simon finds himself in a weird and wonderful land of forests, swamps and swirling mist after he reads a few passages from a mysterious leather bound book, delivered, if you're interested, by a small puppy. Right, anyway. *Simon the Sorcerer* is just like a cartoon: half the time you just sit back and watch the stropky lad mouthing off to characters he meets as he strides confidently along.

Rhyme time

Several nursery rhyme characters put in an appearance. At one bridge Simon meets the Three Goats Gruff. After the first goat is about to be caught out by the old troll-under-the-bridge gag, the troll confesses he's sick of the rhyme, can't bear to be shoved under the bridge any more and is starving hungry because he never gets any goats!



Cockney adventurer-cum-sorcerer Simon prepares to enter the Swamping's lair through the tree door...



Walk to, look at, open, move or consume... the choice is yours

Simon and the Swamping

Near a swamp Simon finds the cosy home of an ageing green reptile, called a 'Swampling'. Inside, a sizable cooking pot hangs over a roaring fire and the room has a homely glow. The harmless Swamping is slumped sadly over his wooden table when Simon knocks on the door but the prospect of a visitor livens him up no end.

'It's so nice to have person come to visit me,' the droopy Swamping bubbles, giving a little hop for joy.

'Er...' says Simon. You can imagine him thinking 'Uh oh, weirdo alert.' 'I is so pleased.'

At this point you get to choose one of four things Simon can reply to the Swamping. I chose: 'Well, actually... I think I've got the wrong house.'

Bad move! 'Wah!' the skinny green thing started crying. 'I thought you were my first birthday friend. I thought you'd come to play with me for my birthday.' Now another choice: Simon can either make his excuses and walk out on the sobbing reptile (outside he exclaims: 'I feel a serious guilt trip coming on') or say soothing things to calm the fickle beast. 'Sit, sit, I bring special birthday stew!' a chirpy Swamping immediately cheers up and claps his hands.

'Er...'

'Friend! I give my friend special swamp stew! Ancient and secret recipe handed down from Swamping to Swamping for generations.'

'Hang on, I didn't agree to...'

'I very pleased with this batch' says the Swamping as he bounds over to serve Simon the gruesome green sludge.

Another choice: 'I can't eat that, I'll die', 'What's in this stuff?', 'I only just ate. Sorry', or 'OK. I'll give it a whirl'.

It turns into a nightmare for poor Simon. The flippin' Swamping steadfastly refuses to take no for an answer and bursts out crying if Simon tries to refuse the stew, politely or otherwise.

Is there no way out for Simon in this hell hole cottage? There might be. For instance, why not have a try of that innocent looking chest in the corner...

You control Simon with the mouse, pointing and clicking on the screen where you want him to walk and he keeps an inventory of items under his purple wizard's hat, including a false beard and a keg of beer! So what's so funny about it? Simon's dry wit, his distinctly

British sense of humour.

He tries awfully hard to be polite but usually cannot resist the urge to be really lippy and gets himself into pointless rows with odd bods that he meets who, frankly, cannot resist rising to it.

Sam Greenhill





061 766 8423

Phone lines open :-
Mon - Fri 09.00 - 17.00
Sat 10.00 - 17.00

FAX: 061 766 8425

New Acorn Hardware

(Econet/Ethernet/PC Card versions available
ring for details)

A4 4/60 Mb HD Portable	
c/w Acorn shoulder bag	£1699.00
A5000 2Mb Ram / 80Mb HD	
Arm 3, Acorn Multiscan Monitor	£1275.74
A5000 Learning Curve / 2Mb Ram	
as above c/w software	£1318.30
A5000 Home Office / 2Mb Ram	
as above c/w software	£1360.85
A5000 4Mb Ram 160Mb HD	
Arm 3, Acorn Multiscan Monitor	£1445.96
A5000 Learning Curve 4Mb / 160Mb HD	
Arm 3, Acorn Multiscan Monitor	£1488.51
A5000 Home Office 4Mb / 160Mb HD	
Arm 3, Acorn Multiscan Monitor	£1531.06
A4000 Home Office System	
Arm 250, Acorn Monitor	£935.32
A4000 Home Office Multiscan System	
Arm 250, Acorn Multiscan Monitor	£977.87
A4000 Learning Curve System	
Arm 250, Acorn Monitor	£892.76
A4000 Learning Curve Multiscan System	
Arm 250, Acorn Multiscan Monitor	£935.31
A4000 HD 80 System	
Arm 250, Acorn Monitor	£850.21
A4000 HD 80 Multiscan System	
Arm 250, Acorn Multiscan Monitor	£892.76
A3010 Action Pack	
Arm 250, TV Modulator	£339.57
A3010 / 2Mb Learning Curve System	
Arm 250, Acorn Monitor	£637.45
A3020 / 2Mb FD System	
Arm 250, Acorn Monitor	£675.00
A3020 / 2Mb FD Multiscan System	
Arm 250, Acorn Multiscan Monitor	£717.55
A3020 / 2Mb HD 60 System	
Arm 250, Acorn Monitor	£825.00
A3020 / 2Mb HD 60 Multiscan System	
Arm 250, Acorn Multiscan Monitor	£867.55
Acorn Pocket Book	
Spreadsheet, Word Processor, D/base	£199.00

Upgrades

A3000	
1 Mb Ram (2 Mb in total)	£Call
4 Mb Ram	£Call
5.25" External f/disc buffer	£39.00
Joystick Interface	£32.00
Serial Upgrade	£19.00
A3010	
1 Mb Ram (2Mb in total)	£Call
4 Mb Ram	£Call
A3010 to AKF12/17 adaptor	£9.95
A3000/A3010	
20 Mb Int Hard Disc	£179.00
40 Mb Int Hard Disc	£229.00
60 Mb Int Hard Disc	£259.00
84 Mb Int Hard Disc	£289.00
Joystick (Quickshot III)	£12.00
User & Analogue Podule	£46.00
User & Midi Podule	£46.00
A400	
1 Mb Ram	£Call
2 Mb Ram	£Call
3 Mb Ram	£Call
5.25" Ext. floppy disc interface	£39.00
Dust Cover	£9.95

A3020/A4000

2Mb Ram	£99.00
Econet Module	£49.00
PC Card 386 1Mb	£225.00
PC Card 486 4Mb	£425.00

A5000

2Mb Ram Card	£110.00
4-8Mb Ram Upgrade	£399.00
Dust Cover	£12.95
Technical Reference Manual	£65.00

A4 Portable

A4 Battery Pack	£50.00
A4 Econet Upgrade	£50.00
A4 Shoulder Bag	£35.00
A4 Technical Reference Manual	£65.00

System Upgrades

RISC OS 3

RISC OS 2 -> 3.1 Upgrade	£41.70
RISC OS 3 -> 3.1 Upgrade	£16.17
RISC OS 3 Hardware Kit A300	£25.00

Expansion Cards

Econet Module (A3000/400)	£46.00
Hawk V9 Digitiser (A400/5000)	£199.00
I/O Expansion Card (A400/5000)	£79.00
Midi Expansion Card (A400/5000)	£65.00
SCSI Card - Acorn (A400/5000)	£229.00
SCSI Card - Morley (A400/5000)	£149.00

ROMBO Colour Digitisers

A3000 inc. podule housing	£72.30
A400 / A5000	£72.30

Aleph 1/Atomwide

Arm 3 Upgrade	£129.00
386 PC Expansion Card 1Mb	£399.00
386 PC Expansion Card 4Mb	£499.00
486 PC Expansion Card 1Mb	£499.00
486 PC Expansion Card 4Mb	£585.00
Windows Drivers for above	£25.00
Parallel SCSI adaptor	£45.00
RemoteFS	£45.00

Monitors

Acorn Standard Colour AKF30/40	£199.00
Acorn Multiscan AKF18	£299.00
Taxan 795 Multivision	£499.00

Printers

Canon

Bubblejet BJ-10sx	£175.00
BJ10sx inc. turbo driver	£215.00
Sheetfeeder for BJ-10ex/sx	£48.00
BJ200	£279.00
BJ200 inc. turbo driver	£309.00
BJ230	£309.00
BJ230 inc. turbo driver	£359.00
BJC800 (col.) inc. s/w	£1469.00

Citizen

120D+	£114.00
Swift 90 Colour	£169.00
Swift 200	£199.00
Swift 200 Colour	£225.00
Swift 240	£239.00
Swift 240 Colour	£259.00
Swift 128K Memory	£35.00

(2 Year Warranty on ALL Citizen Printers)

Hewlett-Packard

HP DeskJet 510C	£239.00
HP DeskJet 500C	£279.00
HP DeskJet 550C	£449.00

Computer Concepts

Laser Direct (LBP4 Hi Res.)	£849.00
Laser Direct (LBP8 Hi Res.)	£1279.00

Scanners

Flatbed A4 256 Grey SCSI (CC)	£745.00
Flatbed A4 without SCSI card	£585.00
Scan Junior Scanner 256	£199.00
Scanlight Video 256	£220.00

Fax

Fax Pack (CC)	£259.00
---------------	---------

Acorn Purchase Schemes

HeadStart Finance Scheme
(13.75% APR)

Teachers / Academics / Students Scheme
(13.75% APR)

★ Please call Jayne Watkins for free information packs ★

FREE

Acorn 3 Years On Site Warranty on all Acorn Systems*
purchased from Dabhand Computing

*excludes Acorn Purchase Schemes / Education Schemes
A4 Portable / Acorn Printer / Special Offers

Printer Drivers

Midnight Graphics

Sprite Dumps	£10.00
Swift/90/24/240, Epson 24, HP Paintjet, Integrex 132/Colourcel, Juki 5520, Star LC10/200/24-200	

Ace Computing

Printer JX (Colour Dot Matrix)	£18.00
Printer DJ (Deskjet 500C)	£18.00
Printer PJ (Paintjet)	£18.00
PRO Drivers (All)	£36.00

Beebug

Deskjet 500/550C Driver	£15.00
Star/Epson/Citizen (Colour)	£15.00

Cables

Arc - 15 Pin to 9 Pin Adaptors	£9.95
Arc - Monitor - 8833 inc sound	£8.65
Arc - Monitor - 8833 II inc sound	£8.65
Arc - Parallel Printer Cable	£5.00
Chocks Away / Stunt Racer	£9.95
(3m serial cable enabling dual machine play)	
Keyboard Extender 400/5000	£7.50
Mouse Extender	£7.50

BBC/Master Software

Ring for Software List and Prices

Archimedes Software

Software Site Licences - Ring for Prices

4 Mation

Chameleon	£35.00
Chatter	£34.00
Craftshop 1 & 2 - each	£19.00
Desktop Basic Editor	£25.00
Granny's Garden	£23.00
Jiglet	£19.00
Jigsaw	£19.00
Noot	£41.00
Noot Art Disc	£10.00
Poster	£75.00
SmArt	£50.00
SmArtFiler	£32.00
SmArt Packs - each	£15.00
Aliens, Animals, Dinosaurs, Egypt, *Faces, Fantasy, Fashion, Fiddles & Drums, Heraldry, *Homes, *Leisure, Look Smart, Smartoons, Trees & Gardens (* Available in English, Welsh, French, German & Spanish)	
Snippet	£35.00
Vector	£75.00

Ace Computing

ArcLight	£55.00
Euclid 2	£30.00
Mogul	£26.00
Splice	£34.00
Tween	£35.00

Acorn Computers

1st Word Plus - One only	£50.00
--------------------------	--------

Advance	£88.00
Desktop Assembler (V 2)	£118.00
Desktop C (V 4)	£179.00
Font - Starter Pack, Newhall - each	£35.00
Level 4 AUN Software	£399.00
PC Emulator / Free Shareware	£92.00
TCP/IP Programers Pack	£50.00
TCP/IP Protocol Suite	£199.00

Beebug

DeskEdit 2	£24.00
Desktop Thesaurus	£18.00
Hard Disc Companion 2	£45.00
Hearsay II	£69.00
Masterfile 3	£45.00
Ovation	£84.00
Playback	£17.00

Brilliant Computing

Ring for FREE Special Needs Pack

Clares Micro Supplies

Artisan 2	£43.00
Fervour	£19.00
Illusionist	£69.00
Interdictor	£10.00
Interdictor II	£25.00
ProArtisan 2	£109.00
Render Bender 2	£78.00
Rhapsody 2	£45.00
Schema	£90.00
Topographer	£63.00

Colton Software

Pipedream 3	£72.00
Pipedream 4	£119.00
Resultz	£109.00
Wordz	£88.00

Computer Concepts

ArtWorks	£124.00
Canon BJ10e/x Driver	£42.00
Canon BJC800 Driver	£95.00
Compression	£34.00
Equasor	£37.00
Font Pack - AvanteGarde/Bookman -ea	£24.00
Graphics Card	£225.00
Impression II Borders Disc	£12.00
Impression Business Supplement	£34.00
Impression II	£117.00
Impression Junior	£65.00
Show Page	£109.00

Cygnus Software

Iron Lord	£14.00
Tower of Babel	£14.00
Twin World	£14.00

Dabhand Computing

Arc DFS	£22.00
Visual Backup	£42.51

Database Software	
Fun School 2 under 6 years	£16.95
Fun School 2 6-8 years	£16.95
Fun School 2 over 8 years	£16.95
Fun School 3 under 5 years	£16.95
Fun School 3 5-7 years	£16.95
Fun School 3 over 7 years	£16.95
Fun School 4 under 5 years	£18.00
Fun School 4 5-7 years	£18.00
Fun School 4 7-11 years	£18.00

Domark	
3D Construction Kit	£25.00
Mig29 Super Fulcrum	£24.00

Dyslexia Software	
Specialist software for all ages - home / education	
Call for details	

Empire	
Pipemania	£16.00

Electromusic Research	
Creations Discs 1-8 ea.	£19.00
Microstudio	£78.00
Studio 24 Plus	£149.00

ESM	
Desktop Folio	£60.00

Gremlin	
Zool	£20.00

Hybrid	
Elite	£31.95

Icon Technology	
EasiWriter 2	£115.00
Dictionaries - each	£30.00
Danish, Dutch, French, German, Italian, Norwegian, Spanish, Swedish, Swiss-German	
StartWrite	£55.00
TechWriter	£159.00

Krisalis Software	
Battle Chess	£21.00
Champions Collection - Leader Board / Man. United / Squash / Boxing	£22.00
Chuck Rock	£17.00
Gods	£19.00
Hero Quest	£19.00
James Pond	£19.00
Krisalis Collection - Pipemania / Revelation / Mad Professor Mariarti / Terramex	£21.00
Lemmings	£19.00
Manchester United Europe	£19.00
Nebulus	£19.00
Oh No! More Lemmings	£15.00
Populous	£22.00
Sim City	£22.00
Swiv	£19.00
Turbo Challenge 2	£19.00

Leading Edge	
A3010 Joymaster	£15.00
Investigator II	£22.00
Joystick Interface (All Models)	£32.00
Desktop Tracker	£50.00

Lingenuity	
CableNews	£136.00
Presenter GTI	£66.00

Longman Logotron	
ArcComm 2	£47.00
Eureka!	£82.00
First Logo	£22.00
Insight	£68.00
Landmarks - each	£17.50
Aztec, Civil War, Columbus, Egypt, Elizabeth I, Rainforest, Victorians, World War II	
Logo	£55.00
Maggie	£40.00
Notate	£49.00
Numerator	£39.00
Numerator Chaos	£18.00
Pendown Etoiles	£49.00
Pendown Plus	£68.00
Pendown Outline Fonts	£18.00
Pinpoint	£65.00
Pinpoint Junior	£23.00
Revelation 2	£75.00

Revelation ImagePro	£127.00
S-Base Personal	£75.00
S-Base Developer	£140.00
SkyHunter	£22.00
Talking Pendown	£58.00

MicroPower	
Chess 3D	£14.00
Zelanites	£15.00

Midnight Graphics	
ClipArt 1 / Clipart 2 each	£29.95
Express	£29.95
Tracer	£29.95

Minerva Software Applications	
Ancestry	£59.00
Atelier	£69.00
Cadet	£135.00
Desktop Office 2	£75.00
Easiword 2	£45.00
Flexifile	£75.00
Graphbox	£55.00
Graphbox Professional	£104.00
Home/Club Accounts	£34.00
Linkword - French/German/Spanish - ea	£35.00
Multistore II	£125.00
PrimeArt	£69.00
PrimeMover	£75.00
PrimeWord	£55.00
ProCAD	£394.00

Leisure	
Bug Hunter in Space	£11.00
Bug Hunter / Moon Dash	£11.00
Casino	£11.00
Caverns	£11.00
Family Favorites	£11.00
Freddy's Folly	£11.00
Hoverbod	£11.00
Jet Fighter	£11.00
Maddingly Hall	£11.00
Orion	£11.00
Redshift	£11.00
Talisman	£11.00
Thundermonk	£11.00

Northwest SEMERC *	
Conform Keyboard Software	£18.00
Le Monde a Moi	£24.00
Meine Welt	£24.00
My World (Program)	£20.00
My World 2	£30.00
My World - Christmas Disc	£12.00
My World - Design	£12.00
My World - Fuzz Buzz	£14.00
My World - Geog. Key Stage 1	£12.00
My World - I'm Special	£12.00
My World - Nursery Disc	£12.00
My World - Maths	£12.00
My World - Patterns	£12.00
My World - Sampler	£12.00
My World - Skeletons	£12.00
My World - Village/Town	£12.00
Oldham Keyboard	£99.00
Full Phases	£30.00
Phases 3	£20.00
Phases - Borders disc	£12.00
Phases - Christmas disc	£12.00
Phases - Clip Art 1	£12.00
Phases - Very Hungry Caterpillar	£12.00

Oak Solutions	
Draw, Print and Plot	£35.00
Genesis II	£99.00
Worra Battle	£10.00
WorraCAD	£74.00

Sherston Software	
!Draw Help - Tutorial	£15.95
!Help - RISC OS 2 Tutorial	£7.95
!Help 3 - RISC OS 3 Tutorial	£9.95
Animated Alphabet	£19.00
Animated Numbers	£19.00
Arcventure I - Romans	£25.00
Arcventure II - Egyptians	£25.00
Arcventure III - Vikings	£25.00
Badger Trails	£35.00

Christmas Allsorts	£16.00
Connections	£27.00
Dreamtime	£20.00
Farm	£19.00
Fleet Street Phantom	£23.00
Food for Thought	£16.00
Glimpse	£8.50
Graph_IT	£19.00
Highlighter	£32.00
Mapventure	£23.00
Microbugs	£25.00
Nature Park Adventure	£24.50
Naughty Stories (6) or £9.50 ea.	£48.00
Recall	£37.00
Selladore Tales	£24.00
Space Mission Mada	£23.00
Splash!	£15.00
Split an Image	£16.00
Stig of the Dump	£22.00
Story Starts	£25.00
Teachers Cupboard	£24.50
Teddy Bears Picnic	£23.00
The Crystal Rain Forest	£35.00
The Crystal Maze	£29.00
Toby at the Seaside	£23.00
Viewpoints	£35.00
Wizards Revenge	£17.00
Wizards Return	£17.00
Worst Witch	£21.50

SIMMIS	
Flight Sim Toolkit	£27.00

Superior Software	
Air Supremacy	£16.00
Conqueror	£15.00
Master Break	£14.00
Play it again Sam 1	£19.00
Repton 3	£16.00
Speech!	£15.00
Superior Golf	£14.00
Technodream	£19.00
The Last Ninja	£19.00
Zarch	£14.00

The Data Store	
FontFX	£8.95
ShapeFX	£9.95

The Fourth Dimension	
Apocalypse	£14.00
Articulate	£18.00
Arctist	£18.00
Boogie Buggy	£14.00
Break 147 / Superpool	£25.00
Black Angel	£26.00
Cataclysm	£14.00
Chocks Away	£18.00
Chocks Away 2 + Ext. Missions	£27.00
Chopper Force	£18.00
Demons Lair	£19.00
E-Type Compendium	£18.00
Enter The Realm	£18.00
Grievous Bodily ARM	£15.00
Holed Out Compendium	£18.00
Nevryon	£14.00
Pandora's Box	£18.00
Powerband	£14.00
Saloon Cars - Deluxe	£25.00
Stunt Racer 2000	£25.00
The Dungeon	£25.00
The Real McCoy 2	£23.00
The Real McCoy 3	£23.00
The Real McCoy 4	£25.00
The Wimp Game	£14.00
Virtual Golf	£23.00
X-Fire	£16.00

Triple R Education	
10 out of 10 Algebra	£17.50
10 out of 10 English	£17.50
10 out of 10 Maths	£17.50
10 out of 10 Early Essentials	£17.50

Books (No VAT)	
Archimedes Assembly Language	£14.95
Archimedes Operating System	£14.95
The above books have accompanying discs add £5 for 5.25", £7 for 3.5"	

C: A Dabhand Guide 3rd Edition	£16.95
A3000 Technical Guide	£29.95
Assembler Release 2	£25.00
BASIC V: A Dabhand Guide	£9.95
BBC Basic Guide (Acorn)	£19.95
Budget DTP (Draw & Edit)	£12.95
DTP Seeds (4Mation)	£8.45
Desktop C Release 4	£25.00
Desktop Development UG	£25.00
Graphics on the Arm - A DHG	£14.95
First Word Plus - Dabhand Guide	£13.95
as above with disc	£21.90
Impression - Dabhand Guide	£14.95
as above with disc	£16.95
M128 Ref. Man.Pts 1&2 (ea.)	£14.95
Programming in Ansi C	£14.95
RISCOS 3 PRM's	£99.00
Understanding Spreadsheets	£9.95
Wimp Programming	£14.95
as above with disc	£18.95

Hours of Opening	
Monday - Friday 9.00 a.m. - 5.00 p.m.	
Saturday 10.00 a.m. - 5.00 p.m.	



- Important Facts**
- NO Minimum Order Value
 - NO Carriage Charges in Mainland UK
 - ALL Goods Despatched within 24 Hours, subject to stock levels
 - Acorn Education Dealer
 - Acorn Service Centre
 - Hotline Support on all Hardware and Software purchased from us

Terms & Conditions

TERMS: EC residents add 17.5% VAT to all prices, except books. Carriage "FREE" on all items in the UK ("with the exception of 'remote' areas). Foreign orders, carriage at cost. (quotations available). Access/Visa cards accepted. Dabhand Computing Ltd. is an Authorised Acorn Education Dealer. Official orders accepted from public sector/education/PLCs, otherwise cash with order. Tender invitations welcome. Callers welcome. We are 2 minutes north of J17, M62. Prices subject to change without notification. Goods offered subject to being unsold. A copy of Terms & Conditions available upon request.

DABHAND COMPUTING

DABHAND COMPUTING LTD
5 Victoria Lane
Whitefield
Manchester, M25 6AL

● Z88, two 128K Eproms, 128K Ram, PC Link, Arc Link, power supply unit, parallel lead, software, books, manuals, case etc, all in very good condition – only £135. Contact Mr B Walker, West Midlands area. Telephone: (0384) 292271

● A3000, colour monitor, Risc Os 3.1, HCCS 2Mb expandable Ram, 100Mb Scsi hard disc, latest emulator, lots of software – £750. Contact Mr R Channon, Broadstairs. Tel: (0843) 603803

● Master with 65C102 co-processor, Taxan supervision monitor, dual 40/80 track double-sided disc drive, Bar Code Reader, modem, Eprom Blower/Eraser, many utilities including Lisp, Forth, 8CPI – £350. Contact A Hynds, Uxbridge. Tel: (0895) 230826

● A5000, 40Mb hard drive, 2Mb Ram, complete with monitor and Learning Curve, Dr Dos 5, Risc Os 3.1 – £1600 or near offer. Contact Mr K Camp, Hants. Tel: (07050) 373772

● A440 and Arm 3, colour monitor – £650, A310, hard drive, needs slight attention – £250, 60 Archimedes software titles also available. Please contact R Barns, Bedford. Telephone: (0234) 765068

● BBC B, DFS, Issue 7, excellent condition, disc drive, much software, games and educational – £100. Contact H Rymkiewicz, Milton Keynes. Tel: (0234) 711657

● Hybrid Music 5000, 4000, 2000 and other software, perfect condition, worth £500, sell for – £180 ono. Contact Mr M Barker, Newcastle-Upon-Tyne. Tel: 091-2713734

● Master 128, Microvitec monitor, 40/80 track disc drive, mouse, View Professional, software worth £300 plus, all manuals – £370. Contact Mr A Dally, Cumbria. Tel: (0228) 711026

● A3000, Learning Curve, colour monitor and stand, educational and games software, less than two years old, and hardly used – only £675. Contact I Clarke, Spalding, Lincolnshire. Telephone: (0706) 362297

● A3000, 2Mb Ram, colour Archimedes monitor, mouse, Risc Os 2 applications discs and PD software, very good condition – £650 ono. Contact Mr J Mirza, Aston. Tel: 021-328 6806

● Risc Os programmer reference manual, unused – £50. Contact R Spencer, Notts. Tel: (0909) 473092

● Wanted: A3010, will swap for Pentax ME Super Auto SLR complete with 50mm, 80-210 and 25-50mm zoom lenses, flash, case etc (three lenses total. Contact Mr M Kohut, Belper. Telephone: (0773) 829217

● Wanted: Arxe systems hard drive controller card (Alpha series) for Archimedes and possible hard disc drive. Contact Mr P Hodgson, North Yorks. Tel: (0748) 811383

● A3000, 2Mb, 21Mb internal hard disc, Risc Os 3.1, stereo colour Acorn monitor, PD, joystick, dust covers, games, boxed, registered, all manuals – £500 ono. Contact Mr N Dawson, Tunbridge Wells. Tel: (0892) 525286

● A3010 upgraded to 2Mb, eight months old with two years warranty, plus PC Emulator V1.7, many utilities and games, worth £900, sell for – £600 or near offer. Contact W Scott, Herts. Tel: 081-953 8913

● BBC Acorn User magazines, complete set November 82 onwards, except issue 105, also subscribers discs March 90 onwards, any reasonable offers accepted. Tel: (0524) 68354

● A5000 with multiscan monitor, 2Mb Ram, 40Mb hard drive, Risc Os 3.1 upgrade – £1000 ono. Contact Mr C Dakin, Cambs. Tel: (0354) 693111

● BBC Master, 40/80 track 5.25in disc drive, twin joysticks, plinth, plenty of software with books, manuals, magazines and a printer cable – £125 ono. Contact Mr S May, Mid Glamorgan. Tel: (0656) 667473

● Wanted for Archimedes: auto dial, modem, Logo and/or Forth, light pen. Mr S Carr, Stevenage. Tel: (0438) 754080 daytime

● Wanted: Design student desperately needs design software for Archimedes A3020, buy/gift/loan, everything appreciated. Contact Mr D Weaver, Nottingham. Tel: (0602) 663360

● A3000, colour, 4Mb, 50Mb Oak Scsi hard drive, extras, manuals, very good condition – £650 ono, or swap for best IBM compatible 386 portable offered. Contact G Hulme, Liverpool. Tel: 051-727 4602

● Wanted: Archimedes contacts from all over the world, will reply to all. Contact Mr R Patre, 20 Ash Priors, Widness, Cheshire WA8 9NH

● Eprom programmer (dataman gang of 8), Eproms plus master cartridges, BBC/Master books including reference manuals I and II – offers. Contact Mr D Crompton, Darlington. Tel: (0325) 480538

● BBC B, 40 track 5.25in DDFS, Wapping Editor, mouse, 64K Rom/Ram board, sideways Ram, Transferom, Music 500, Wordwise, printer, manuals, games, joysticks – £230 or near offer. Contact Mr L Herbert, Essex. Telephone: (0708) 521586

● Star/Epson print driver – £10, Draw Help – £10, Help – £5, all original discs and manuals. Contact Mr D Needle, Surrey. Telephone: 081-397 8720 evenings only

● Deltacat joystick – £15, mouse port splitter – £10, Interdictor II – £12, E-type Compendium – £15, Enter the Realm – £12, all of it is as new. Contact R Anderson, Scrabster. Telephone: (0847) 63657

● A3000, 2Mb Ram, colour monitor, user guide, software, all in very good condition – £350. Anyone interested please contact Mr N Davies, London W11. Telephone: 071-229 1624

● Amx Mk3 mouse – £20, green screen hi-resolution monitor, composite video inputs – £25, 20 BBC Music 5000 albums, Pias 14, Zenon – £50 for the total, will split if required. Contact Mr D Stebbings, Kent. Telephone: (0304) 830956

● A3000, 2Mb, plus Archimedes colour monitor, mouse, software and Citizen 120D printer, very good condition – £675, no time wasters please! Contact Mr J Mirza, Birmingham. Tel: 021-328 6806

● Wanted: Mini Office II for BBC B, 80 track 5.25in disc drive, must be in good condition with instructions. Contact S Puttnell, Hitchin. Tel: (0462) 435154

● Three computer systems for sale. Send SAE to G Holdsworth, 121 Lion Road, Bexleyheath, Kent DA6 8PA

● Master 128, BBC B with Acorn DFS, Cumana 40/80 track disc drive, Microvitec 1451 VDU, will separate – sensible offers please. Contact Mr L Parren, Southend. Tel: (0702) 585358

● A3000, 1Mb Ram colour monitor, with socket for Arm 3, 45Mb IDE drive, Risc Os 3.1 – £500, including postage. PC Emulator V1.8 – £35. Contact Mr T Dagger, Blackpool. Tel: (0253) 691074

● Master 128, colour monitor, 40/80 track disc drive, computer table, software galore, manuals, reference manuals, excellent unmarked condition – £350. Contact Mr I Bamborough, Portsmouth. Tel: (0705) 678410

● Master 512 with PC Emulator, Dos, gem, mouse, monitor, Teletext adaptor, dual 40/80 track disc drives, modem, Comstar II, Mos Plus, Wordwise Plus II, View, Viewstore, Viewsheets, manuals, cartridges, many extras – £500 ono. Contact R Greenfield, Highnam. Tel: (0452) 415106

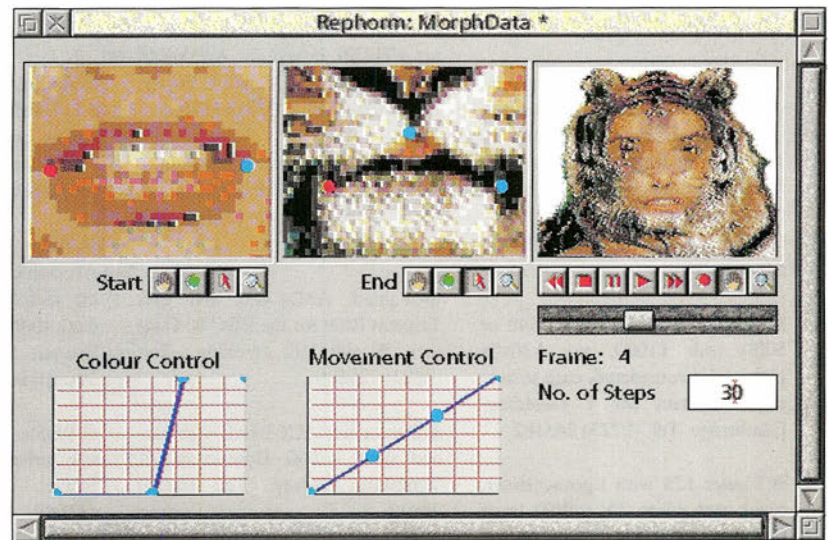
● A3000, colour monitor, Learning Curve, original boxes and manuals, variety of software – £450. Contact Mr D Hatton, Cambs. Tel: (0354) 53016

● A3000, 2Mb, Risc Os 3.1, colour monitor, loads of software, Canon BJ10e printer, BBC Acorn Users – £800 ono. Mr P Rennie, Merseyside. Tel: 051-630 3887

● A3000, 2Mb, Risc Os 3.1, colour monitor, loads of software, Canon BJ10e printer, BBC Acorn Users – £800 ono. Contact Mr P Rennie. Tel: 051-630 3887

!Rephorm

the ultimate RISC OS morphing application



- ☐ produces sprites and animations
- ☐ creates Ace Film files as used in Projector (supplied), Genesis, Titler etc
- ☐ simple 'no fuss' user interface - just place control points on start and end sprites
- ☐ variable (non-linear) motion and colour change for all control points
- ☐ high speed operation even on large sprites
- ☐ fully multi-tasking during morph generation
- ☐ instantaneous 'thumb-nail' display during morph
- ☐ can also produce fades and wipes
- ☐ compatible with RISC OS 2 and 3
- ☐ supports 16-bit and 24-bit images
- ☐ any intermediate frame can be saved as a sprite
- ☐ animations can be edited using !Splice - available separately



£49.95

please add £2 p&p and VAT - £61.04 inclusive

Broadway House 149-151 St Neots Rd Hardwick Cambridge CB3 7QJ
Tel: 0954 211760 Fax: 0954 211767

● Intergrex colourjet 132 - £220, Citizen 124D printer - £130, Flight Sim Toolkit - £20, Archimedes World cover discs March 91-July 93 - £30. Contact C Fisher, Wall-sall. Tel: (0922) 57814

● Archimedes 440/1, Taxan 770 plus, Scavenger handheld scanner, LC10 colour printer, Ovation, 1st Word Plus, Render Bender, lots more including games, can split - £900. Please contact R Dally, Cromer. Telephone: (0263) 511465

● Wanted: Acorn A4x0/1, 540 or 5000, sub £1000, no A30x0s please! All considered, cash to best offer. Contact Mr T Gladding, Cambridge. Tel: (0223) 243182

● Master 128 with Epson printer, black and white TV, 40/80 track disc drive, joystick, games, books, paper, manuals, cables, all boxed - £290. Contact Mr K Anderson, Liverpool. Tel: 051-226 8881

● A440, 4Mb ram, 20Mb hard drive, Taxan 770 multisync monitor, Spark FS PRM - £850 ono, Master 128, twin 5.25in double disc drives - £250 or near offer. Please contact Mr J Savage, Leighton Buzzard. Tel: (0525) 237 625

● Wanted: Watford digitiser for use with Wapping Editor, also hard drive and utilities and software for BBC B. Contact A Lindley, Cleveland. Tel: (0642) 490782

● Master 128K, 40/80 track disc drive, Morley Teletext adaptor with ATS chip V3, Genie Junior DTP package) WYSIWYG screen print utility, some mags - £160. Please contact Mr P Measures, Staffordshire. Telephone: (0889) 564113

● 20Mb hard disc, suitable for A400 - £50 ono. Contact Mr D Simms, Ackworth. Tel: (0977) 610110

● A310 with colour monitor and Epson LQ850 printer, all in excellent condition, risc Os 3.1, manuals, books, software including two games - £550. Contact Mr M Cuncliffe, New Malden. Tel: 081-337 9118

● A3000, 1Mb Ram, colour monitor, manuals, printer, video digitiser, software - £600. Contact Mr I Vincent, Loughborough. Tel: (0509) 852907

● A3000, 1Mb Ram, colour monitor and Learning Curve - £4250 ono. Contact (0276) 451328 after 6pm

● Watford Archimedes handscanner 400 DPI, boxed, for A300/400/5000 - £99 ono. Contact E Foster, Cambridge. Tel: (0223) 63545

● EMR Studio 24 V2, virtually unused, as new - £60 ono. Contact Mr R Steed, Hebden Bridge. Tel: (0422) 845119

● Wanted: AMX-Max and TFS Teletext Rom for the BBC B. Contact W McCall, Woking. Tel: (0483) 729879

● Panasonic KX-P1081 printer and stand - £60. Contact Mr K Tompkins, Surrey. Tel: (0276) 28932

● A3000, 1Mb Ram, colour monitor, stand, original, manuals, 1st Word Plus II, software etc, condition as new - £575. Contact Mr P Pay, Dunbartonshire. Tel: (0389) 52905

● Archimedes games and Teletext receiver for sale. Send SAE to Mr G Waits, 8 Cedar Drive, Erdington, Birmingham B24 0DL

● Roms for BBC B, Master or compact: Interbase - £25, Interchart - £12, Intersheet - £18, boxed with manuals. Contact Mrs J Aellen, Bracknell. Tel: (0344) 422614

● A3000, Acorn RGB colour monitor, all original manuals and packaging, as new, also ST506 20Mb hard drive, prices negotiable. Contact Mr S Singh, Oxford. Tel: (0865) 63939

● A5000, Acorn multisync monitor, 4Mb Ram, 105Mb hard drive, Learning Curve and lots of games, books, magazines, as new - £1100. Contact Mr K Berwick, Kent. Tel: (0732) 872896

● Archimedes 420/1, 2Mb Ram, 20Mb hard drive, upgraded to Os3, Acorn colour monitor, Midi expansion card, excellent condition, games, music software - £1000 ono. Contact Mr S Atkinson, Leeds. Tel: (0532) 781455

● Ten month old A5000 with 4Mb Ram, 40Mb hard drive, Risc Os 3.1 - £1260. Please contact Mr D King, Staffs. Telephone: (0902) 850605

● A3000, 2Mb Ram, 20Mb internal hard drive, second disc drive and colour monitor, book and software included - £550. Contact Mr R Raymond, Exeter. Tel: (0392) 496387

● A3000, colour monitor Risc Os 3.1, 34Mb IDE hard drive, Arkworks, Investigator II, manuals etc - £700 ono. Contact Mr A Hoskinson, Cheshire. Tel: 061-905 3823

● 2Mb upgrade for 305/310 - £50, Armadillo 448BM stereo/Midi 8 bit sampler card - £50, Cumana dual 40/80 track disc drive - £60. Contact Mr G Sharpe, Reading. Tel: (0734) 874769

● Wanted: A5000 or A3000, no silly prices please. Contact Mr D Steele, Reading. Tel: (0734) 471949

● Bughunter II - £7, Hoverbod - £6, Caverns - £6. Contact Mr A Ellis, Lancashire. Tel: (0282) 773595

● A420/1, 4Mb Ram, 40Mb hard drive, software, Panasonic multisync monitor, KXP 1124 24 pin printer, Roland DXY 1200 plotter - £1300. Contact Mr G Weaver, London SE25. Tel: 081-653 5235

● A3000, 2Mb Ram, 49Mb Scsi drive (external), Oak Scsi computer card, second external 3.5in disc drive, only - £600 ono. Contact Mr P Riches, Stevenage. Tel: (0438) 311071

● Acorn AKF18 multisync monitor - £200, Pace Linner V21/23 modem - £50, both excellent condition, manuals, leads and packaging. Contact Mr G Rhodes, Doncaster. Tel: (0302) 722781

● BBC B+ with sideways Rom, expansion Wordwise Plus, graphics extension, Cumana 40/80 double sided disc drive, Epson RX80 F/T printer, will split if necessary - £200. Contact Mr I Digman, Lancs. Tel: (0253) 712371

● Illusionist, mint condition - £65. Contact Mr A Howart, Little Langford, Bow, Devon. Tel: (0363) 82303

● A3000 Midi package, 4Mb Ram, colour monitor, Midi AKA16, Inspiration 256 track professional sequencer, excellent condition - £895. Contact Mr H Thind, Slough. Tel: (0753) 820526

● BBC B, green screen monitor, 40 track disc drive, Epson FX80 dot matrix, View Rom, Amx mouse, utilities, games - £200. Contact Mr C Geisow, Nottingham. Tel: (0949) 20668

● A3000, AKF12 colour monitor, 2Mb Ram, serial interface, monitor stand, manuals, application discs - £450 ono. Please contact Mr R McGinn, Surrey. Telephone: (0932) 220781

● Electron, Plus 1, Pres Plus 3 with ADT Rom, 3.5in floppy drive, View and Lisp cartridges, two spare keyboards, software, manuals, books, magazines - £90 ono. Contact Mr D Jackson, Hebden Bridge. Telephone: (0422) 845327

● A5000, 4Mb, 80Mb hard drive, Multiscan monitor, 20 games and lots of other software - £1100 ono. Contact J Hanshaw, Reading. Tel: (0734) 575952 evenings

● Archimedes 410/4, 4Mb Ram, Arm 3 processor, Risc Os 3, Oak Scsi, 100Mb hard drive - £795 (less monitor), Taxan 795 Trinitron monitor - £350, PC card, 4Mb - £350. Contact Mr W Crossland, Essex. Tel: (0279) 424139

● A3000, 2Mb, colour monitor, good condition, plus lots of software - £450 or near offer. Anyone interested contact Mr C Kent, Hemel Hempstead area. Telephone: (0442) 247460

● Master 128k with 40 track Cumana disc drive - £180. Anyone interested please contact D Kinton, Wigston. Telephone: (0533) 887098

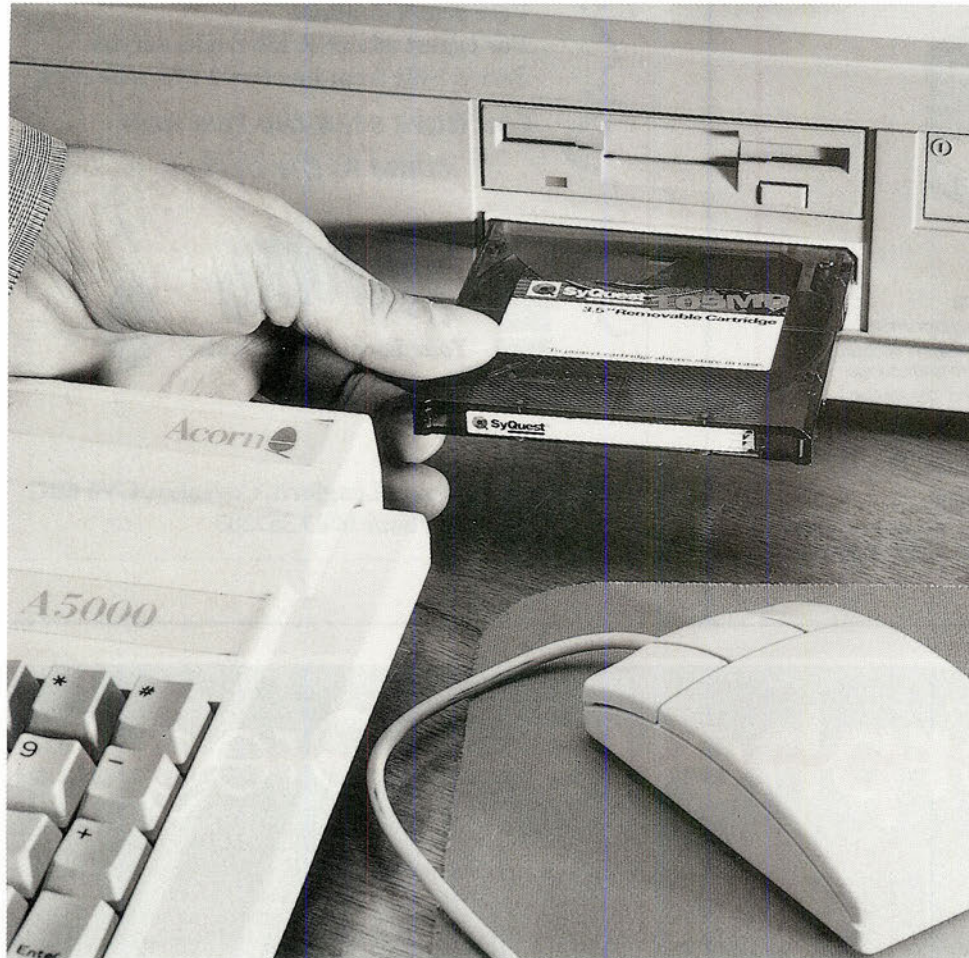
● Archimedes A310M with colour monitor, Scsi controller, backplane and fan, software, very good condition, manuals etc - £400 or near offer. Contact Mr S Roscoe, Chorley area. Telephone: (0257) 450215

● Lingo-master, the aid to learning foreign languages is now available for only £5 (shareware), unregistered version available for £1. Contact Mr N Caplan, 33 Alwoodley Lane, Leeds, West Yorkshire LS17 7PU

● Archimedes games and Teletext receiver for sale. Send stamped addressed envelope to Mr G Waits, 8 Cedar Drive, Erdington, Birmingham B24 0DL

UNLIMITED HARD DRIVE

See a demonstration at Acorn World '93 - Stand 48



**Easy installation
with NO
soldering**

**Compact
REMOVABLE hard
drive**

**Convenient and
Portable**

**Unlimited
storage capacity**

**Ideal solution
for data security**

**FAST file
transfer**

fast...flexible....affordable

High performance from a compact, removable hard drive with unlimited storage capacity. The possibilities offered by this system are endless, allowing total flexibility plus data mobility and security.

Twice the speed of optical drives. Up to 20% faster than the 80Mb A5000, 40% faster than the 40Mb A5000. The SyQuest 105Mb IDE drive can be mounted into your A5000 in place of a second floppy disc drive.

Installation is simple, it's user fittable and needs no soldering. The drive, fitting kit and step - by - step instructions plus one cartridge comes complete for £399+VAT+CARRIAGE. (£477 inc). Extra cartridges are £69+VAT. (£81 inc).

It is also available as a SCSI drive which can be used with ALL Acorn 32-bit computers. 2 Year Drive and 5 Year Cartridge Warranty.

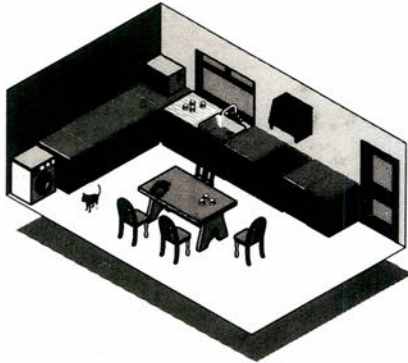
For further details contact:

Norwich Computer Services

96a Vauxhall Street, Norwich, NR2 2SD Tel:0603 766592

SPEX

For the Acorn Archimedes range of computers
3D Environment Design Software
For all Primary and Secondary Schools



- 2D plan, 3D view
- Pictograms
- Barcharts
- Simple spreadsheet
- 'Drawfile' exporting
- Drag & Drop editing
- Cut out and make a plan model
- Four home environments - Kitchen, Bathroom, Bedroom and Lounge.
- Worksheet pack and Clip Art disc

FREE SITE LICENCE INCLUDED!

For further information please contact us at our Freepost address.
£99 + VAT (Site Licence included for Schools) Official Orders Welcome
Package includes: SPEX disc, Initial environment disc, Project, worksheets and disc.
ExpLAN UK Limited. Freepost. TAVISTOCK, Devon. PL19 9BR. Tel/Fax 0822 613868



Invitation

Join Rob & Kate for cheese & wine at the grand opening of MicroBits. Coventry's first Acorn consumer dealer on the 9th October.

Full range of Acorn hardware & software
Free local installation.
Free demonstration.
For expert advice & after sales service.
Just ½ Mile from junction 3 M6 motorway.

*You have seen the rest now
come to the best*



MicroBits



Your Local Acorn Dealer
0203 367283

221 Longford Road, Longford, Coventry, CV6 6BG
Phone 0203 367283

£34.95 inc. Available Now!

Morpheus

Oregon

DEVELOPMENTS



The latest buzzword in computer and video graphics at the moment is 'morphing', a software technique that enables computers to perform shape animations similar to the mercurial delights in Terminator2, and just about every TV advertisement currently screened.

By simply defining a grid of points that link the source and destination images together, Morpheus can produce smooth morphs of 256 colour/greyscale sprites, or even full 24-bit colour files.

- * Typical processing speed of over 5 frames per minute
- * Creates single frames, or multitasking animations
- * Fully multitasking, in the desktop environment
- * Variable timing between each morph frame
- * No additional hardware/software required
- * Supports Computer Concepts ColourCard
- * Full support of 24-bit Clear files
- * Supports Acorn Replay system
- * Simple and intuitive to use

Risc Os 3.1 or above required

Order Hotline 021 353 6044  

36 GROSVENOR AVENUE, SIRETLY, SUTTON COLDFIELD, B74 3PF.

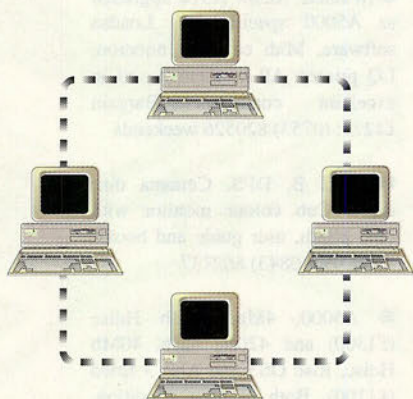
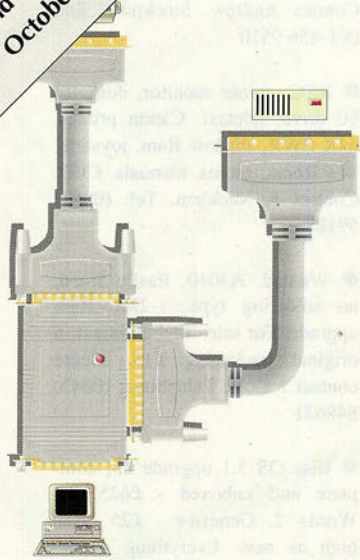








Come and see us at Wembley on stand 34
October 29th, 30th and 31st



Pushing back boundaries

For the past five years, Atomwide have specialised in producing high-performance solutions for the entire range of Acorn 32-bit computers. From the first ARM3 board, to the latest in SCSI technology, we have continued to deliver innovative products that complement the power of the Archimedes. Because of our continuing expansion, we have recently relocated to purpose-designed, new premises. All Atomwide products are available direct from our new address or from leading Acorn dealers.

SCSI

A range of interfaces are available that allow up to seven SCSI peripherals to be connected to a computer, without the need of a module slot. All computers with a bi-directional parallel port are supported. Two versions exist; Mono/SCSI provides a single SCSI port, whilst Printer/SCSI has a SCSI port plus a parallel printer port. Printer/SCSI is also fully compatible with Computer Concepts' dongles and Turbo Drivers.

Mono/SCSI - £49 Printer/SCSI - £75

Ethernet

Atomwide Ethernet cards offer a comprehensive range of solutions engineered to provide the best performance for each Acorn RISC computer from the R260 to the A4 portable, and including the new A3000-series machines. Full compatibility is guaranteed with all the hardware and software standards including the all-important IEEE 802.3. 10base2, 10base5 and 10baseT options are available. Other network products include 10baseT hub boxes, repeaters and fibre-optic link adapters.

Single Ethernet card - £149 Educational/Dealer prices on request

Memory

Memory is an important part of a computer system and increasing it will greatly enhance the performance of the machine. We produce a complete range of memory expansion products for the range of Acorn RISC machines, allowing them all to be upgraded to 4Mb RAM. In addition, the A300, A400, A400/1 and A5000 can be expanded to a full 8Mb RAM by installing one of Atomwide's new range of memory upgrades. (Machines must first be fitted with 4Mb). 8Mb upgrades are fitted with large ROM sockets, hence compatibility with all releases of RISC OS (including RISC OS 3) is ensured.

A300, A400, A400/1 8Mb - £399

A5000 4Mb - £89 A5000 8Mb - £399

Please note that prices shown do not include VAT or carriage. Due to changes in the memory market, RAM prices may vary so call us for an up to date guide.



ATOMWIDE

7 The Metro Centre, Bridge Road,
Orpington, Kent. BR5 2BE
Tel 0689 838852 Fax 0689 896088
Email: sales@atomwide.co.uk

● BBC/Electron games, all tapes – £2-£4 each, BBC Acorn User and Micro User mags, if interested send stamped addressed envelope for details. Please contact Mr A Smith, 7 Park Lane, Walney Island, Barrow-in-Furness, Cumbria LA14 3AE

● A310, hard drive, two 3.5in floppy drives, podule backplane, PC Emulator, DTP software with dot matrix printer and colour monitor – £600 or near offer. Please contact Mr C Hill, Cambridge. Telephone: (0223) 840082

● BBC B, 40/80 track disc drive, Viw, DDFS, graphics Rom, Zif socket, midi system interface, joysticks, Daisywheel printer, games, software, discs, manuals, covers – £150. Contact Mr M Casely, Withyham. Tel: (0892) 770635

● Master 128 with Overview, double sided disc drive, colour monitor, amber monitor, complete set of manuals – £400. Contact Mr H Wall, Worcester. Tel: (0905) 358712

● Archimedes laser direct printer, Qume model, extra toner, spare drum and interface card – £495. Interested contact Mr R Clayton, London E10. Telephone: 081-558 5698

● Acorn Cambridge workstation (B+64k, ADFS, 20Mb hard drive, manuals, colour monitor, floppy drive, 32016 co-processor – £100 ono. Contact Mr M Trembl, Surrey. Tel: 081-681 5372

● A310, Acorn colour monitor, second floppy plus Euclid, Arclight Mocul, Render Bender, Pipedream, Elite, Lemmings, Chocks Away and more, Risc Os, PRM, good condition – £450. Contact Mr N Richards, Enfield. Tel: 081-363 8043

● A5000, 4Mb, multiscan monitor, Learning Curve, 40Mb hard drive, Watford scanner, HHCS digitiser, Epson LX-400, Impression II – £1575. Contact Mr A Marshall, Staffs. Tel: (0785) 760082

● I have a Torch C500 and require any software 5.25in or manuals for this make or any help at all, thank you. Please contact M Barrett, Ipswich. Telephone: (0473) 612135

● BBC B+, two modems, Cannon printer, two disc drives, Music 500, BBC B, Roms, books, games, worth £2000, sell for – £675. Contact Mr A Blake, Leeds. Tel: (0532) 611412

● Wanted: Teletext adaptor for BBC B, with software. Contact Mr S Pendred, Willingham. Tel: (0954) 261045

● 1st Word Plus II – £30, Hearsay I – £20, Pacmania – £5, Master reference manuals I and II – £10. Contact Mr M Ridd, Devon. Tel: (0271) 72140

● Pineapple digitiser – £99, Illusionist – £65, Turbo Challenge II – £15, Pandora's Box – £10. Contact Mr S Clay, Norwich. Tel: (0603) 402819

● A3020, hard drive version, colour monitor, immaculate condition, five months old, Cannon Bubblejet printer with manuals, discs, original boxes, only – £1000. If interested contact Ms H Ruane, London N4. Telephone: 071-281 9953

● BBC B+, two modems, Cannon printer, two disc drives, Music 500, BBC B, Roms, books, games, worth £2000, sell for – £675. Contact Mr A Blake, Leeds. Tel: (0532) 611412

● A310, colour monitor, games, 20Mb, Scsi hard drive – offers, also Electron Plus 1 – £50. Anyone interested please contact Mr S Burley, Surrey. Telephone: (0342) 833004

● A3010, 2Mb Ram, under 120 months old – £360. Anyone interested please contact Mr J Cotton, Broadstairs. Telephone: (0843) 862326

● Archimedes 420/1, Acorn colour monitor, good condition, DTP software, dozens of fonts and games, manuals and Epson printer included – £600. Contact Mr L Bellers, London SE20. Tel: 081-778 1925

● Wanted: 6502 tube - second processor required for BBC B. Anyone interested contact Mr A Mills, Rochdale. Telephone: (0706) 370020

● A3000, 2Mb Ram, colour monitor, manuals – £525, many Micro User magazines – offers. Contact Mrs J Howard, Sheffield. Tel: (0909) 550037

● A3000, Risc Os 2, 2Mb, joystick interface, Active Scart lead (for TV/monitor) – £295. Contact T Bratley, 5 Western Outway, Grimsby DN34 5HE

● BBC B, Issue 3 with DDFS, 32K Shadow Ram and sideways Rom/Ram boards, View Professional, Toolkit Plus, Exmon, Sleuth, 5.25in and 3.5in 80 track disc drives, Revs, Aviator – £160, Beebug magazines, Vols 1-1,1 complete and bound – £60. Contact P Hutchinson, Watford. Tel: (0923) 239788

● Wanted. Old Acorn magazines. Contact Brian O'Keefe, London N3. Tel: 081-349 4877

● BBC-B £60, dual 5.25in disc drives plus software £40, 20Mb hard disc £100. Also some spares available. Contact Tim, Surrey. Telephone: (0428) 65849 evenings only.

● Wonderland and Saloon Cars £10 each or possible swap. Contact Chris Bennett, Portsmouth. Tel: (0705) 296135

● Boxed as new. Real McCoy 1 and 2, Nevryon, Fish, Terramex, Top Banana, Powerband, Conqueror, Chocks Away, £10 each. Contact Andrew, Stockport. Tel: 061-456 9510

● BBC, colour monitor, dual 40/80 drive, teletext, Canon printer, 64K SWR, shadow Ram, joystick, 14+ Roms, games, manuals, £350. Contact K Micklem. Tel: (0865) 59188

● Wanted. A3010. Easily fitted, no soldering type. 1-2Mb Ram upgrade. For sale: Technodream in original packaging £15. Please contact J Cole. Telephone: (0843) 848621

● Risc OS 3.1 upgrade kit, complete and unboxed – £625. 1st Word+ 2, Genesis+ – £25 each, both as new. Everything – £60. Tim Hopson. Tel: 081-989 8738

● Wanted. Acorn A310 upgraded to A5000 specification. Loads software, Midi card for notation, LQ printer. All of them boxed in excellent condition. Bargain £1275: (0753) 820526 weekends

● BBC B, DFS, Cumana disc drive, Cub colour monitor with dual plinth, user guide and books. £150. Tel: (0843) 862737

● A5000, 4Mb, 40Mb Hdisc (£1300) and 420/1, 4Mb, 40Mb Hdisc, Risc OS3 and Arm 3 fitted (£1100). Both in mint condition, boxed with monitors and extras. Tony Racine. Tel: (0582) 454439

● BBC Master, 40/80 Pace disc drive, Citizen 120-D dot matrix printer, green monitor, earthed screen, manuals, offers Contact Richard, Leeds. Tel: (0532) 690397

FREE READER ADS

Why not take advantage of our free reader ad service? Fill in the details below and send this coupon (or a photocopy of it) to: Free Ads, BBC Acorn User, Redwood Publishing, 101 Bayham Street, London NW1 0AG.

Your Name.....Tel:

Address.....

Please write your Free Ads details here (in block capitals please). Maximum 25 words.

.....

.....

.....

New Developments

Word Processing
Desktop Publishing
Digitising & Scanning
Multi Media
Thesaurus/Dictionary
Audio
Colour Printing
ClipArt & ArtWorks CD



Computer Concepts Ltd

For Acorn RISC Computers

The word processor for Acorn RISC computers

Impression Style is a new word processor combining the best points of all earlier word processors with many powerful features new to the Acorn platform. Impression Style is a word processor suited for all users - the occasional letter writer, student, small businessman or professional writer. It also incorporates many DTP features so that it can handle complex page layouts with ease.

IMPRESSION Style

Impression Style is a capable and very powerful product but it is also an extremely easy to use word processor. In order to make it simple to use, we have incorporated the very latest software technology, found on no other Acorn word processor, including two types of on-line help - interactive help and full hyper-text help. Not only can you tell at a glance what all the controls and menus do, there is comprehensive on-line documentation explaining the features. Simply double clicking on a topic or keyword will display an explanation - and of course you can do this on screen while using Impression Style.

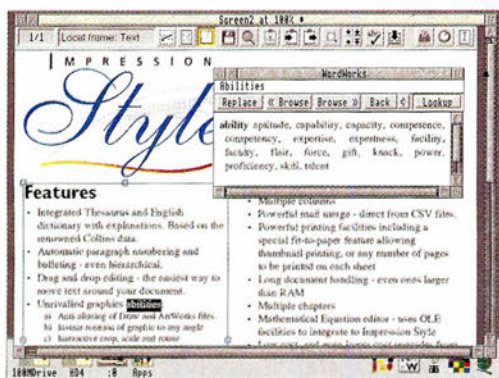
It also offers drag and drop editing - the simplest, most intuitive way to edit documents. There is an integrated thesaurus and dictionary with definitions (another first for Acorn machines) both based on the highly respected Collins publications. Impression Style is the wordsmith's dream come true.

Modern word processing involves much more than creating and editing long text files - producing monospaced typewriter-like documents is often no longer acceptable. Therefore Impression Style offers page layout capabilities second only to the very best DTP packages and it does this without compromising the word processing abilities.

It allows graphics to be embedded into the text or placed anywhere on the page and includes another first for Acorn users - OLE or Object Linking and Embedding.

OLE EXPLAINED

If you want to edit the embedded object (this is usually a graphic, but it could be other data such as a table or equation) you simply double click on the data, which is then transferred directly to the appropriate editing application - for example !Draw. Once you've edited the graphic, simply closing the window will transfer the data directly back into Impression Style. This powerful technique couldn't be more convenient or easier to use.



HOW TO UPGRADE

Registered owners of Impression Junior and Impression II, quoting your registered serial number:

Existing Impression Junior owners to Impression Style: £29.00 + VAT (£34.07 incl.)
Existing Impression Junior owners to Impression Publisher: £80.00 + VAT (£94.00 incl.)
Existing Impression II owners to Impression Publisher: £29.00 + VAT (£34.07 incl.)
Existing Impression II owners to Impression Style: £29.00 + VAT but NB a further upgrade to Publisher will cost another £29.00 + VAT (£34.07 incl.)

Owners of other WP and DTP packages *

Return the key/master/No 1 disc of your existing package with:

Upgrade to Impression Style: £70.00 + VAT (£82.25 incl.)

Upgrade to Impression Publisher: £120.00 + VAT (£141.00 incl.)

* This offer is open to owners of the following packages: Wordz, Ovation, First Word Plus, TechWriter, EasiWriter, StartWrite and Advance.

There isn't room to cover all aspects of Impression Style, but some other features include:

- Impression Junior, II, and Acorn Advance file compatibility.
- An integrated thesaurus and dictionary.
- Automatic section and paragraph bulleting, numbering and re-numbering.
- Full support for 24 bit, full colour images.
- An open, extendable graphics filter system with TIFF loaders.
- Low cost upgrades from other word processors.
- New interactive text ruler system.
- Styles.

And the best feature of all:

All this costs only £99 + VAT (£116.32 incl.)

A full specification is available on request.

Illustration shows new button bar enabled at the top of the screen. This offers direct, instant access to commonly used functions such as saving, cut, copy, paste. It also shows the new zoom tool which allows ArtWorks style - drag-zoom into any region of the document.

It also shows a word selected in the text and the pop-up thesaurus window showing a list of synonyms.

Where else in the world can you buy 10 to 12 man-years of development work for just £99 + VAT (£116.32 incl.)

Word Processing

IMPRESSION PUBLISHER

Impression Publisher is a new high end desktop publishing package which has evolved from the most successful Archimedes software package, Impression II. Publisher incorporates all the new user friendly word processing abilities of Impression Style as well as some new and advanced page layout capabilities.

Computer Concepts is the first company to incorporate full colour separation capabilities directly into their programs. Together with the new version of ArtWorks, this package offers full support, including separations, of 24bpp colour images and even 32-bit CMYK images, along with the ability to load TIFF files (even Mac, PC and CMYK variations). Also new is the use of OLE (Object Linking and Embedding) and the provision of full on-line interactive and hyper-text help.

Impression Publisher offers better support for typesetting - built in PostScript separation abilities with control over halftone screen type, crop marks, page bleed areas etc. It also offers auto tracking and kerning (RISC OS 3 fonts), and brightness and contrast control of graphics. It will even create a list of all the fonts used in your document.

Finally, Impression Publisher is the first Acorn DTP package to offer repelling, irregular shaped frames.

Desktop publishing for Acorn RISC computers

How Does OPI Work?

All you have to do is take your picture or negative along to a suitable imagesetting bureau where they will scan the picture at very high resolution, creating two versions of the image. One high resolution version remains at the bureau, usually stored on optical disc, and the other low resolution TIFF or EPS image is for you to take home and place in an Impression frame. You can treat this picture like any other graphic - cropping, rotating or scaling it as desired. When the page is output to a PostScript file, rather than storing the images, the OPI system just stores the names of the high resolution graphic files. This means the resulting PostScript file is usually very small and can easily fit on a single floppy disc. At the bureau their system substitutes the very high resolution images when it is typeset - resulting in professional magazine quality full colour pages - with none of the pain.

If you want the best page layout or document creation software, there is no alternative.



Special upgrades are available from Impression II - details are shown opposite. A full specification is available on request.
Impression Publisher - £169 + VAT (£198.57 inc)

OPI Supplement

For professional pre-press or publishing work this optional upgrade to Impression Publisher supports the Open Prepress Interface - a system for incorporating very high resolution full colour images without the need for huge hard discs or large amounts of memory. In addition the OPI supplement includes the ability to load EPS (encapsulated PostScript).

OPI supplement
upgrade price from
Impression Publisher
- £230 + VAT (£270.25 incl.)



ESTIMATED RELEASE
DECEMBER
1993

Desktop Publishing



ScanLight Video 256

ScanLight Video 256 provides the ultimate image capture solution by combining the ScanLight 256 greyscale scanner and the GreyHawk fast greyscale video digitiser on a single expansion card.

By combining both scanning and digitising features on one card you can now have the best of both worlds. Scanners are ideal for capturing printed diagrams, pictures or photographs, while a video digitiser can be used to capture images from video sources such as video cameras or television. This single board solution saves not only money but also an expansion slot over the traditional two card solution.

Hardware

- Single width expansion board suitable for A300, 400, 500 and A5000 computers.
- Supplied with hand held greyscale scanner, 100 to 400 dpi resolution, 105mm scanning width.
- Straight edged scanning ruler to ensure straight and accurate scans.
- Monochrome, 16 grey level or 256 grey level image capture for photographic quality results.
- Composite video input to digitiser.
- 256K RAM framestore, 8-bit, 256 greyscale digitising ability, multiple resolution, real time capture.
- 768x288, 512x256 or 512x512 video capture resolution.

The package is supplied complete with interface board, scanner head, manuals and software. Min 2 MBytes RAM recommended.



Package does not include video camcorder

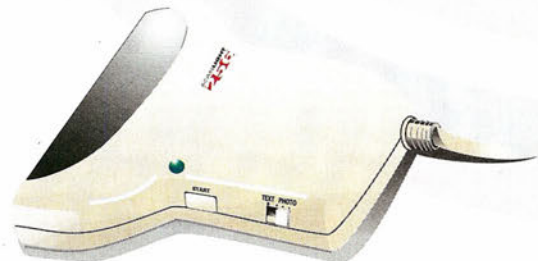
Software

- Ultra fast 'TakeOne' video preview application provides live video in a window on the desktop - up to 50 frames a second at quarter screen size.
- ScanLight image processing software provides a host of processing options for captured images; detailed brightness and contrast control; on the fly screen dithering for best quality images in 16 colour screen modes; image cropping, enhancing, sharpening options; instant rotation by any angle.
- Saves images as 256 grey level sprites - suitable for practically all RISC OS software.
- All software fully RISC OS compliant and fully RISC OS 2 and RISC OS 3 compatible.

ScanLight Video 256 - £220 + VAT (£258.50 incl.)

ScanLight 256 - £189 + VAT (£222.07 incl.)

GreyHawk greyscale digitiser £99 + VAT (£116.32 incl.)



Available now from selected Acorn dealers, Wild Vision or direct from Computer Concepts. Direct order hotline 0442 63933. Upgrades are available from the GreyHawk and some ScanLight 256 products - details on request.

Digitising & Scanning



30 day Money Back Guarantee

If, for any reason, you are not fully satisfied with ScanLight Video 256, we offer a 'no quibble' 30 day money back guarantee.

Eagle M2

MultiMedia expansion card and software



At Acorn World, Wild Vision are launching the Eagle M2, an expansion card which promises to be one of the most influential developments ever for the Acorn RISC computers.



MultiMedia is all about the manipulation by computer of three different types of media; still pictures, video and sound. The Eagle M2 is a multimedia expansion card for Acorn computers which allows you to capture still pictures, capture and replay video movies and capture and replay stereo sound.

The Eagle M2 is ideal for use in combination with interactive presentation software where sound, pictures and moving video all form part of the message. So, for example, in schools it could be a tool to enhance project work or it could be used to create imaginative and interesting training material.

The Eagle M2 is a Wild Vision/Computer Concepts co-production. Its main features are superior video digitising, both of still images and of Replay movies, stereo audio sampling and playback, and MIDI connection.

Thanks to some of the latest advances in digital television techniques, Wild Vision have been able to design a card which features real time hardware scaling and dithering, so that digitised images are clear right down to postage stamp size.

The full package includes four software applications. These are a video viewfinder and image capture utility, also enabling Replay movie generation and compression (the Acorn Replay software has been developed in association with Acorn Computers Ltd.); Acorn's !ARMovie for playing back the Replay movies you have created; AudioWorks, the new audio manipulation software from Computer Concepts; an application for controlling the mixer facility on the board. There are also several third party companies developing applications for the Eagle M2, including two revolutionary video related products from Eidos.

Eagle M2 is a single-width Archimedes expansion card, suitable for any 300, 400 or 500 series Archimedes with a backplane fitted, the A5000, or for external fitting on an A3000 (for which podule housing is recommended). 4 MBytes RAM and RISC OS 3.1 is required. For Replay movie capture an A5000 with at least 4 MBytes or an A540 is recommended and a hard disc required.

Key features:

- Real time greyscale digitising.
- Real time full colour digitising.
- 12 bit stereo audio sampling and playback at CD rate (44.1 KHz).
- MIDI (Acorn MIDI interface compatible).
- Real time video movie capture.
- !Replay movie compatible.
- S-VHS and composite video input.
- Line level audio in and out, in addition to audio out through the computer speaker or headphone socket.

The first practical multimedia expansion card for Acorn RISC computers!



Available from
Computer Concepts
and
Wild Vision Ltd.
15 Witney Way
Baldon Business Park
Baldon Colliery
Tyne & Wear
NE5 9PE
Tel.: 091 519 1455
Fax: 091 519 1929

Acorn
Replay™

Full details and demonstrations will be given at the Acorn World Show. A more detailed specification is available on request.



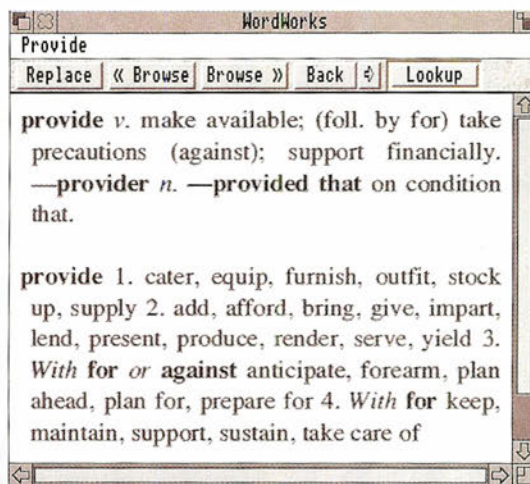
Multi Media

*Computer Concepts' long
awaited electronic
thesaurus and dictionary is
now available.*

The wait was worth it since WordWorks now offers much more than any other thesaurus. This stand-alone application works with all word processors (although it is more integrated with Impression) and is the ideal assistant for all word processor users. WordWorks is unique in that it includes a complete English dictionary with explanations, and so it can be used not only for finding alternative words, but also for spell checking and finding the meaning of words.

Unlike the thesaurus data used in some other products on the Acorn computer (which use public domain dictionaries) WordWorks uses licensed thesaurus and dictionary data from Collins, so you can be sure the information is up-to-date, accurate and of the highest quality.

WordWorks



This shows the WordWorks entry for the word 'provide'. The top part shows the dictionary entry and the lower part shows the thesaurus entry. You can show the thesaurus or dictionary entry, or both.

WordWorks presents an exact on-screen representation of the printed page of a traditional paper thesaurus and dictionary - including italics, highlights etc. It therefore offers the familiarity of the traditional paper product along with the convenience and speed of the computer. It offers

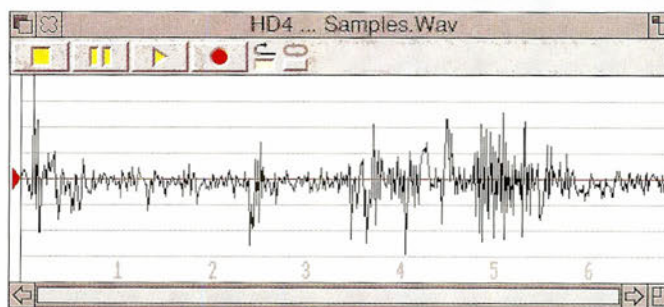
instantaneous lookup of words; once you've found the word or phrase you want, simply double click on it to transfer the selected word to your word processor or editor (this works with all desktop word processors). It also includes complete on-line hyper-text help and instructions so it's not even necessary to read the manual.

Note this product is bundled with Impression Style and Impression Publisher and is included in the upgrades available.

Price £39 + VAT (£45.82 incl.)

**RELEASE
ACORN WORLD
SHOW
OCT 28th '93**

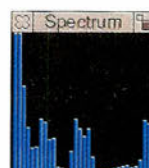
AudioWorks



Shows example waveform, and playback buttons.

AudioWorks is compatible with a whole range of sound files - including those from the PC and Amiga. In addition to playing back from the standard computer speaker, the software can sample from and playback to more advanced audio boards, such as the Eagle MultiMedia card (others to follow).

AudioWorks supports 8 bit, 12 bit, 16 bit, linear signed, linear unsigned, VILC logarithmic, m - law logarithmic, mono and stereo samples.10



Features include:

- Accurate waveform display with instantaneous zoom.
- Cut, copy and paste of any selected part of the sound sample.
- A utility for playing back from hard disc in the background.
- Effects such as echo, reverse echo, amplify, wave form centering, ramp, pitch and amplitude bending, high and low pass filtering, re-sampling etc.
- On screen real-time spectrum analyser and oscilloscope displays.
- Import and export of Microsoft .WAV, Amadeus, DataVox, SoundTracker and RawData formats.
- Full background operation.
- Repeat loops.
- Multiple channel and multiple sample operations.

Price £49 + VAT (£57.57 incl.)

**RELEASE
ACORN WORLD
SHOW
OCT 28th '93**

**Thesaurus/Dictionary
Audio**

The BJC-600 & TurboDriver

Affordable, high quality full colour reproduction is now available for Acorn 32-bit computers. The brand new BJC-600 A4 plain paper printer from Canon, combined with Computer Concepts' 24-bit TurboDriver software, provides a key component in the full colour revolution that is occurring in the Acorn world.

Some of its key features:

- Four colour CMYK inks for the best full spectrum of colours including real black.
- Separate ink cartridges for each of the colours - saves ink and money. It's even possible to change the ink cartridge part way through a page being printed.
- Ultra fast drying inks designed specially to prevent ink spread on plain paper - no other colour ink-jet printer can even come close to the quality obtainable from this printer.
- 360 dpi provides 40% more dots per square inch than 300 dpi printers - visibly better resolution.
- The high quality of print on plain paper means lower running costs than other colour inkjet printers.

The package comes bundled with the latest colour TurboDriver software (and printer cable). This provides the fastest possible print times and full control over half-tones. The software includes advanced grey component replacements and black generation algorithms to ensure accurate colour reproduction and good greyscales - it also avoids 'black flooding' that can occur with other printers.

Price Guide under £500 ex VAT.
Min 4Mbytes RAM recommended
Requires RISC OS 3.1

RISC OS 3
Turbo
DRIVERS

RELEASE
ACORN WORLD
SHOW
OCT 29th '93





The ArtWorks package includes a selection of clip-art and a huge range of high quality outline fonts. Normally ArtWorks is supplied on 15 floppy discs and even then there isn't enough space to include everything we wanted - this CD provides the answer.



As a result of the ArtWorks clip-art competition we received over 700 high quality entries. This CD includes the best of them and many more ArtWorks and other graphic examples.



ArtWorks CD
ClipArt CD



The ArtWorks CD includes:

- Everything that is on the clip-art CD, described below.
- A full copy of the latest version of ArtWorks.
- All fonts in both RISC OS 2 and RISC OS 3 outline format (RISC OS 3 format includes kerning information).



The latest version of ArtWorks (1.5) now includes full support for 24bpp sprites, making it the first (along with the new Impressions) Acorn application to support full colour sprites. Version 1.5 is compatible with the new graphics filter system used by Impression and includes a filter for TIFF files (the industry standard image format).

ArtWorks now includes the ability to print and separate these full colour images. 1.5 is also a new 'fast load' version of ArtWorks, ideally suited to relatively slow filing systems such as CD.

ArtWorks CD is a full and complete package, identical to the standard ArtWorks package including the regular manuals etc - except that all the discs containing the example ArtWorks files and outline fonts have been replaced by the one CD.

Price £169 + VAT (£198.57 incl.)

CD Upgrade for registered ArtWorks owners - £29 + VAT (£34.07 incl.)

Floppy disc upgrade to version 1.5 (program only) - £10 + VAT (£11.75 incl.)



The clip-art CD contains:

- ArtWorks file viewer and over 800 ArtWorks example pictures.
- On-line ArtWorks presentation.
- Demo version of !AudioWorks and example audio files.
- Dozens of high quality 24bpp photographs - ideal for the new 24bpp-capable versions of Impression and ArtWorks.

More applications are now supporting the ArtWorks file format (for example, the Impression range and products from Iota, Clares, Longman Logotron and Risc Developments). The ArtWorks clip-art CD is the ideal way to gain some of the best illustrations available for Acorn computers.

Price £19.00 + VAT (£22.32 incl.)



Computer Concepts Ltd

E&OE Prices & descriptions are subject to change



Destination: Acorn World

WEMBLEY
EXHIBITION
CENTRE
DATE:
FRI 29TH
SAT 30TH
SUN 31ST
October '93

If you thought computer shows only had the latest word processors and spreadsheets,
Acorn World will change your perceptions....

See how a full colour magazine is produced.
Experience the sights and sounds of a laser light
show in the best games arcade in Britain.
See Kodak convert a film onto
a photo CD.
Discover the secrets of
the talking head.
Catch a glimpse of
the future in Acorn's
concept area.

Meet the boffins from the Science Museum.
Discover why children are jumping off
cliffs as part of the curriculum.

New concepts ● ● ●
New products ● ●
New solutions ●

Acorn World:
A TOTAL
EXPERIENCE



SPONSORED BY
ACORNUSER
MAGAZINE

Juggling, face painting, theatre seminars, special needs area... and the latest word processors and spreadsheets!
And so much more...

Book today and SAVE £££s plus have the chance to WIN a fabulous Acorn Pocket Book.

Acorn
WORLD

93

SPONSORED BY
ACORNUSER
MAGAZINE

NAME _____
ADDRESS _____
POSTCODE _____

SAVE MONEY BY BOOKING TICKETS NOW

TICKET TYPE	PRICE	NO. OF TICKETS	AMOUNT
ADULTS	£5.00		£
CHILDREN	£3.00		£
FAMILY	£15.00		£
		TOTAL	£

All cheques made payable to
Acorn Computers Ltd.

Please return your
booking form to
ACORN WORLD, C/O
EXHIBITION PLANNING
SERVICES, PO BOX 162,
STAINES TW19 5JX.

WIN A POCKET BOOK!*



Return your
booking form now
and you will be
entered in our
special prize draw!

Competition details from the Acorn World
address opposite. *No purchase necessary

TICKET HOTLINE: 0784 483818

Acorn



LETTERS

NO FREE LUNCH?

The recent Tesco scheme looks as if it was even more successful this year than it was last year. I collected Tesco vouchers from the 1000 students at my school, as I did last year, so I sit here looking forward to about £500 worth of 'free' software. But what is the *real* cost of this software?

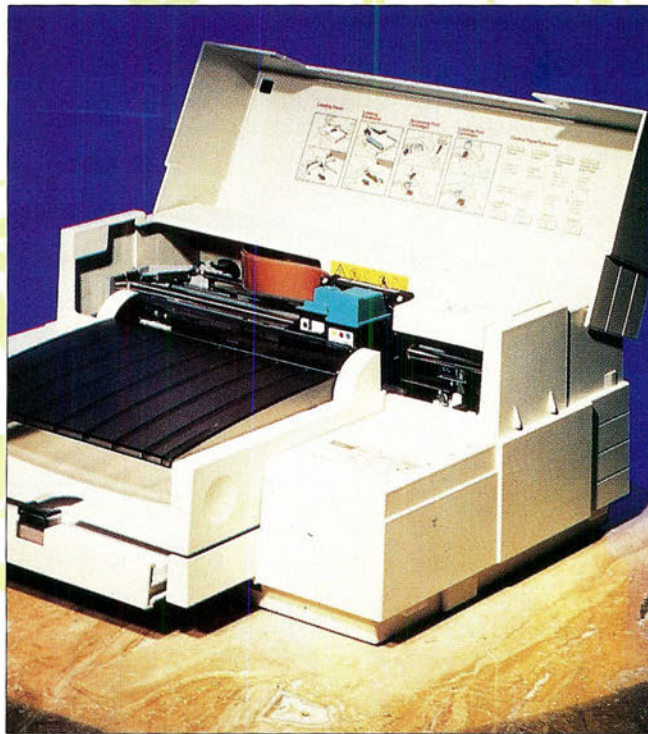
I'm not here to fight for the software houses, nor do I feel any particular loyalty to any of them. I do however know some of the people behind Acorn specialist software companies, and I have yet to speak to anyone who doesn't claim sales are down as a result of this scheme.

One person said: 'it was like someone turning off a tap the day the first advert appeared; it was only sales of non-Acorn hardware which kept us afloat.' And another: 'if they do this again next year, we might as well pack up and go home now.' Emotive words indeed, and others echo similar thoughts.

It seems that the software houses that don't take part in the scheme lose when potential customers choose the software from a competitor because it's free, and those that do take part lose because they're not making enough profit from the transaction.

Both the companies quoted above are seriously worried about their future if another scheme is launched next year. If the companies who specialise in Acorn educational software cease to exist, innovation would be stifled, technical support would dwindle, and prices would go up with the lack of competition. Is this being over-dramatic? Apparently not.

Will I take part in the scheme if it goes ahead next year? It's a tough question. My first loyalty is to my school and students, but some software houses would argue that I would be doing my school a disservice if I did take part. The software houses have a powerful argument, and try as I might, I feel that Tesco's motivation behind the scheme is not purely philanthropic. But



Life in the fast lane? Could be, if you get an HP550C TurboDriver

what about Acorn themselves? Whatever the outcome, Tesco will survive, but the state of the Acorn market is anybody's guess.

I suppose what galls me most is that schools have to resort to charities and publicity stunts to get the basic tools to do the job.

Geoff Preston
Head of IT, Highgate
Wood School

A long letter, but worth the space, I think you'll agree.

TURBO DRIVING

In the article in the August issue on printer drivers, the section on background printing explains quite well the problems with the Acorn printer drivers.

However, the statement that the last stage of printing, when codes are sent to the printer, is a background process may be true for Acorn drivers, but not for our TurboDrivers. The TurboDrivers have always offered background transmission of data, even on Risc OS 2, and it is not necessary to go through two stages to achieve this.

The statement that the printing of documents hangs the machine is also quite untrue for TurboDrivers, as the pro-

cess of rasterisation is significantly faster due to our faster printing routines. So, all stages of the printer driver are improved, resulting in very significant speed increases across the board.

Charles Moir
Computer Concepts

The Archimedes is a wonderful, fast computer. DTP is a joy – until you have to print something; you might as well go and clean the car while you wait for your precious printout. Even if you master the convolutions of 'background printing' in Risc OS 3 you have to wait an age to get your hands back on the keyboard.

At last! Computer Concepts has brought out a TurboDriver for my antiquated LaserJet II. A simple six-page leaflet used to hang up my A5000 for 11 minutes: now I get typing again after just 70 seconds while the laser chugs away in the background.

My advice to Acorn would be to invest in TurboDriver technology for their forthcoming machine: it won't matter how fast the Arm700 is printing if it still hangs the machine for an age.

I Trimble
Nottingham

VALUE ADDED TAXAN

I thought I should write to you to let you know of the excellent service I have just received from Taxan (Europe).

I started to experience problems with my Taxan MV795 which my dealer was unable (or unwilling) to sort out. I contacted Taxan, who not only sent someone all the way to Norfolk from Surrey for an on-site visit, but sorted the problem out there and then.

This service they provided free of charge to compensate for the inconvenience I had suffered through my dealer's poor conduct.

It is not very often these days that service at this level is received and I thought that I should write to give them a pat on the back.

T Grantham
Norfolk

That's the happy letter for the month: shame your dealer wasn't so helpful.

A4 PRICE WAR

With regard to the letter from Mr Imossi about the lack of expansion capability of the Acorn A4 portable. The lack of support from third parties is the result of the small numbers which have been sold. The reason is simple: the price is too high.

The A4 is basically an A5000 in a portable package, but to make the A4 as close to an A5000 as possible you would need to add a full-size keyboard and a multisync monitor. Therefore I consider that the price of the A4 should be no more, and preferably lower than the A5000. If the price was reduced to this level, sales would undoubtedly increase and this would encourage third-party developers to give the A4 the support it deserves.

M Lowe
Essex

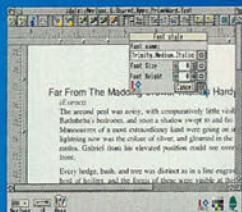
Ah, the old 'make it cheaper and they'll buy it' argument. If I had a penny for every time I'd heard that one, I might be able to afford an A4.

UPGRADE YOUR
COMPUTER
from our superb range of
high quality products

Prime Series

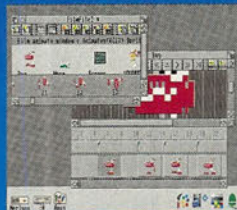
*"The range of software with configurable
button bars making it suitable for
children or adults, for leisure,
education or professional use"*

£79.95 + VAT



£59.95 + VAT

£79.95 + VAT



£79.95 + VAT



MINERVA
SOFTWARE

MINERVA HOUSE, BARING CRESCENT, EXETER, EX1 1TL
Tel. (0392) 437755 Fax. (0392) 421762



PAULANWAG. 0000

UPGRADE YOUR COMPUTER

from our superb range of
high quality products
which offer you excellent
value for money

Hard Drive Upgrades - New Lower Prices and Higher Capacities

The Benefits Of A Hard Drive

Adding a hard drive to your computer is one of the most useful upgrades that you can perform. It will transform the way in which you use your computer as you find that all of your programs will load many times faster. Hard drives are as simple to use as floppy drives, with a new icon appearing on your icon bar.

IDE From RISC Developments

These kits have been designed specifically for the Acorn range, and are extremely reliable. We are constantly improving our range and are now pleased to offer higher capacities at lowest ever prices. They are ideal for home or educational use and have been successfully installed by several thousand Acorn users without problem.

Simple To Install

All of our drives are supplied complete and most can be fitted in minutes with no previous experience or special tools. You will not invalidate your warranty by fitting one of our drives. The drive will be supplied fully tested and formatted ready for immediate use. We offer full technical advice and support by phone should you be unsure of anything.

A3000 Internal Hard Drives

These units consist of a 2.5" drive mounted on the interface card. The unit fits in to the mini expansion slot. Available with an optional User Port to make use of devices such as Concept Keyboards.

A3000 External Hard Drives

The hard drive is supplied in a matching metal case and connects to a metal cased interface that fits externally to the A3000 'expansion' slot.

A3010 Internal Hard Drives

A range of integral drive kits that fit into the mini expansion slot on the A3010. These units use the RISC OS 3 ADFS filing system.

A3020 and A4 Internal Hard Drives

These drives are upgrades for systems that were purchased without the standard Acorn drive. Unfortunately these are dealer fit only and you will need to return your computer for upgrading.

Archimedes (A300 and A400 series) Internal Hard Drives

The drive is fitted in the hard drive slot provided, and the IDE interface is fitted into the podule backplane and can also control a second external hard drive if required.

Archimedes (A300 and A400 series) External Hard Drives

As above except that the drive is supplied in a matching external case.

Archimedes Hard Cards

These drives are mounted on the IDE interface card and will fit in any podule slot on the A300/A400/A540/A5000 series.

A5000 Second Drives

A range of drives that may be used as a replacement to your existing hard drive or as a second internal hard drive.

(Please note: In accordance with the industry convention, all drive capacities are quoted on the basis that 1Mb is equivalent to one million bytes.)

RAM and Processor expansion

RISC Developments produce a full range of RAM upgrades for all machines, including 8Mb boards. Also available is an ARM3 processor upgrade for the A310, A400 series and A3000. The A310 4Mb RAM card also allows RISC OS 3.1 to be fitted without a separate hardware upgrade. All of these items are user fittable except for the A5000 8Mb RAM cards and the ARM3 for an A3000. In these cases, you must return your computer to us for fitting. If you have an A5000 upgraded from 2 to 4Mb, and you wish to upgrade it to 8Mb, you must remove the existing upgrade and purchase the 2 to 8Mb card. If your existing upgrade is a RISC Developments or Acorn model, then we can offer a £60 trade-in on it.

RISC
developments

Code	Description	Price (ex VAT & p&p)	Code	Description	Price (ex VAT & p&p)
0133c	A3000 1Mb RAM	£31	5275g	A3000 Internal IDE 210Mb	£539
0130c	A3000 1Mb RAM (Ugdable)	£59	5240g	A3010 Internal IDE 20Mb	£179
0131e	A3000 4Mb RAM	£139	5242g	A3010 Internal IDE 80Mb	£289
0144c	A3010 1Mb RAM	£29	5243g	A3010 Internal IDE 120Mb	£379
0146e	A3010 4Mbyte RAM	£129	5245g	A3010 Internal IDE 210Mb	£529
0145c	A3020/A4000/A4 2Mb RAM	£89	5230g	A3020 & A4 IDE 20Mb	£125
0125e	A310 4Mb RAM	£269	5232g	A3020 & A4 IDE 80Mb	£229
0278c	A400/1 Series 1Mb RAM	£27	5233g	A3020 & A4 IDE 120Mb	£299
0141e	A410/1 8Mb RAM Card	£569	5235g	A3020 & A4 IDE 210Mb	£479
0142e	A420/1 8Mb RAM Card	£509	5296g	A5000 162Mb 2nd Drive	£219
0143e	A440 & A440/1 8Mb RAM	£479	5294g	A5000 260Mb 2nd Drive	£319
0147g	A5000 2->8Mbyte RAM	£499	5298g	A5000 450Mb 2nd Drive	£519
0124c	A5000 2->4Mbyte RAM	£99	5263g	Arch External IDE 162Mb	£359
0148g	A5000 4->8Mbyte RAM	£429	5265g	Arch External IDE 260Mb	£479
9981g	ARM 3 A3000 Fitting	£30	5266g	Arch External IDE 450Mb	£679
0134e	ARM 3 Upgrade	£165	5290g	Arch IDE 20Mb Hard Card	£199
5297b	User Port Power Supply	£17	5292g	Arch IDE 80Mb Hard Card	£299
5283g	A3000 External IDE 162Mb	£369	5293g	Arch IDE 120Mb Hard Card	£379
5285g	A3000 External IDE 260Mb	£489	5295g	Arch IDE 210Mb Hard Card	£529
5286g	A3000 External IDE 450Mb	£689	5253g	Arch Internal IDE 162Mb	£259
5270g	A3000 Internal IDE 20Mb	£199	5255g	Arch Internal IDE 260Mb	£379
5272g	A3000 Internal IDE 80Mb	£299	5256g	Arch Internal IDE 450Mb	£579
5273g	A3000 Internal IDE 120Mb	£389			

The main Event

Until ExplAN's *Event* desktop diary program arrived, I never knew that the day I was born the Russians successfully retrieved a canine cosmonaut for the first time.

As you might guess, *Event* is no ordinary diary. This version offers over 700 items of historical trivia to brighten up your day. More importantly, *Event* can import and export diary data with *Schedule* on the Acorn PocketBook and *Agenda* on the Psion Series 3.

Event is a subset of an integrated calendar/diary, address book and notepad, called *Occasion*, which is still under development. *Event* customers get the calendar/diary bit and will be able to upgrade to *Occasion* when it is released.

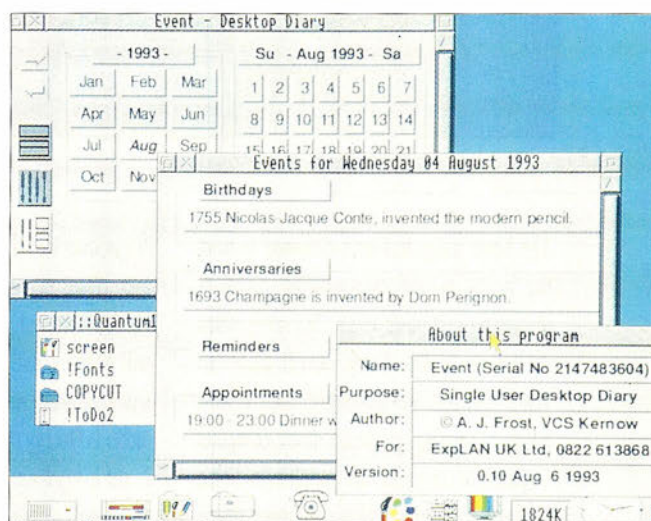
Everything in *Event* centres around the calendar window. This has buttons for all the months of the year plus the days of the currently-selected month. There is an option to show a large calendar which shows a year's months either side of the current year plus

Want to know who got assassinated, born or invaded on the day you made your entry into the world? ExplAN's *Event* could be the diary program for you, as Ian Burley discovers

the month's days each side of the current month. To reveal the days of a different month just click on the relevant monthly button. By clicking on a daily button one or a number of windows related to the diary page appears.

Which windows appear is governed by control icons to the left of the calendars. Options include the basic diary page, a weekly planner window or both windows together on the screen. The weekly planner shows, at a glance, appointments against a timescale and days which have other events programmed in.

You reveal details by clicking on appointment bars. An empty diary page contains four headings; Birthdays, Anniver-



The diary page, showing the calendar and the four standard headings

saries, Reminders and Appointments. The first three function the same and incorporate an optional reminder facility which flags events before, or after the date.

Appointments have time limits as well as the reminder option. The third Appointment variable is Repeat. This allows repeat patterns like every Thursday, Saturday and Tuesday, and alternating weeks. This is ideal if you work very complicated shift patterns, say.

The diary page invites you to click on one of its headings, but doesn't do anything unless an item is already entered. Clicking on an item selects it but to edit it or enter new items you need a menu. A double-click to avoid the menu and go

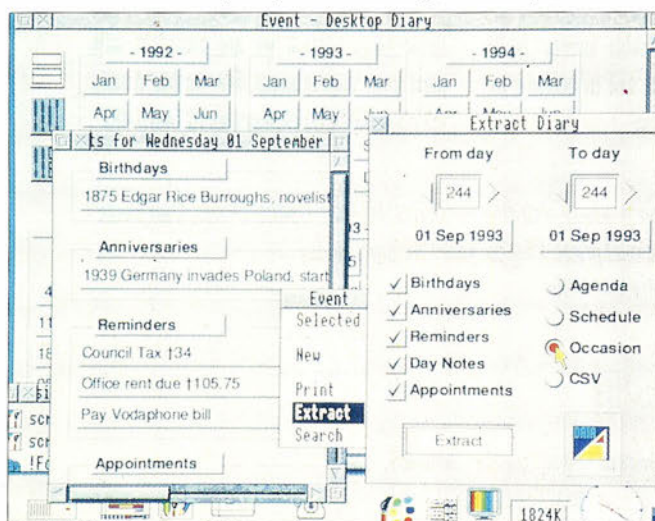
into Edit was what I'd expect.

For me and other Psion Series 3 or PocketBook users, its diary data compatibility feature, via A-Link, is its most attractive feature. You can convert *Schedule* data to *Agenda* or vice versa.

Event should be considered by anyone who uses *Agenda* or *Schedule*. The cost may be a cluttered screen and a slightly odd user interface, but it beats using a pocket-sized keyboard.

Product details

Product: Event
Supplier: ExplAN Software
Tel: (0822) 613868
Price: £24.95



But if you are not careful your screen can get a little cluttered

The Ecole Range



The Ecole range has been designed to meet the needs of the ever-growing ranks of discerning computer users. Not even when we set up in the Acorn market place ten years ago, had we assembled such a wide range of quality products, from computer furniture to upgrades and peripherals. Some products we design and manufacture, others we buy in; names such as Sony, Quantum, and Micropolis. But most important to you is the fact that we purchase only the finest raw materials, components and assemblies. Every product we sell is tested to meet our own Zero Defect standards.

No product we sell as part of the Ecole range ever leaves us untested. When you buy a Focus IT product you can be confident that it will be compatible with your computer and will give many years of reliable service. Our motto is Quality Priced To Succeed, but cost is not everything; we know the meaning of the word service. From an initial sales inquiry to a technical query, we will support you. Please telephone us at any time of the working day—your inquiry is important to us. We offer a no-quibble money back promise, if our products fail to perform to your complete satisfaction.

Whether you are looking for SCSI controller cards, Hard Discs, CD Roms, Magneto Optical Drives or MIMIC (the latest and most advanced Control and Data Logging product), low cost Sound Sampler Black Box, User Port to control your Concept Keyboard, User Analogue Port to connect an experiment, or a mobile trolley to move your computer configuration around your home or establishment, Focus IT has a product to meet your requirements. Please consider our Ecole range, which we are confident will meet your requirements. For further details telephone 0274 618774 or Fax 0274 619482

Has your school a copy of Focus IT? Our newsletter has full details of all our products, including CD Drives, Magneto Optical Drives, User Ports and User Analogue Ports plus editorial and educational prices. Ring for your FREE copy today

All trade names and trade marks are acknowledged



Focus IT 4 Gordon Terrace Idle Bradford West Yorkshire BD10 8LS

Tel No 0274 618774 Fax No 0274 619482

Focus IT Price List

SCSI Internal Drives

A300, A400 & A5000

Size	Drive Man	Warranty	Price
120 Mb	Quantum	2 Years	£299.00
170 Mb	Quantum	2 Years	£358.00
240 Mb	Quantum	2 Years	£469.00
435 Mb	Quantum	2 Years	£699.00
600 Mb	Micropolis	5 Years	£764.00
1000 Mb	Micropolis	5 Years	£1065.00

SCSI External Drives A300, A400, A5000, A3000, A3010, A3020, A4000

Size	Drive Man	Warranty	Price
120 Mb	Quantum	2 Years	£389.00
170 Mb	Quantum	2 Years	£448.00
240 Mb	Quantum	2 Years	£559.00
435 Mb	Quantum	2 Years	£789.00
600 Mb	Micropolis	5 Years	£854.00
1000 Mb	Micropolis	5 Years	£1155.00
1500 Mb	Micropolis	5 Years	£1595.00
2000 Mb	Micropolis	5 Years	£1875.00

SCSI Price includes: Drive unit, controller card, SCSI & CD filing systems, internal mounting kit or External case, PSU, fan, cables, utilities disc & manual. A3000 has optional internal or external SCSI card. A3010, A3020 and A4000 have internal SCSI cards. The warranty period quoted above applies to the hard disc mechanism only. All other parts are one year warranty. Drive units are available as additional devices.

Other Focus IT SCSI Devices By Sony

Dual Speed, Multi-session Photo CD	
Compatible CD Rom Drive	£ 495.00
128 Mb Magneto Optical Drive	£1379.00
600 Mb Magneto Optical Drive	£2249.00

Price excludes: SCSI controller card.

All the above units are external devices and come complete with cables, & manual.

One year warranty.

CD Rom drive does not include bundled CD Rom software titles.

Magneto Optical Drives include one disc, additional discs may be purchased, price on application.

SCSI cards price on application.

Ecole Trolleys

990 x 670 Work surface, 950 x 350 Monitor Shelf, 3 Inch swivel wheels, Rubber tyres, wheels (2) with brakes, Choice of desk heights (500, 600, & 700), Optional 4 way mains block

MCT04 With monitor shelf	£125.95
MCT04P As above + power block	£149.95
MCT05 Mobile work table	£109.95
MCT05P As above + power block	£133.95

Black Box Sound Sampler

Black Box includes the electronics, the microphone and the software.

Black Box Sound Sampler	£29.95
A3000 series User Port & User Analogue Port	

User Port	UP01	£33.00
-----------	------	--------

User Analogue Port	UAP01	£39.00
--------------------	-------	--------

The above prices exclude P&P and VAT. One Off P&P: Black Box, User & User Analogue Ports £2.85. Trolleys £15.00 all other products £10.00 plus VAT.

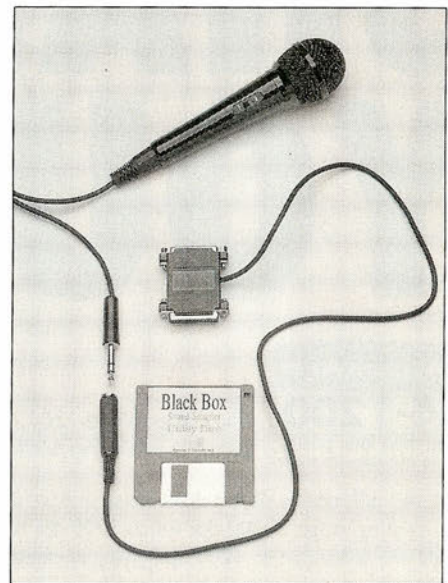
Black Box Sound Sampler

With Intelligent Printer Port

Black Box is the low cost sound sampler for the Archimedes, and it is an ideal way of capturing sounds. Black Box consists of a hand held microphone with integral on/off switch. It simply plugs into the printer port of any Archimedes computer. Black Box has the added advantage of allowing the printer to be plugged in, and data is automatically streamed from the microphone or to the printer. An adaptor is provided which allows a variety of other sound sources to be plugged into Black Box. For example, a CD player can be plugged in and music or speech recorded direct.

Black Box is manufactured to withstand even the most robust classroom use and it could not be easier to use. The software provided with Black Box allows samples to be recorded and played back. Samples can be transferred to multimedia programs via the standard Armadeus file format.

Black Box sound samples give hours of fun and even allow exciting multimedia applications such as talking stories, interactive modern language



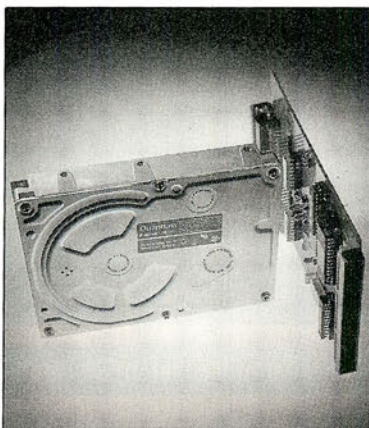
Introductory offer

£29.95 plus £2.50 P&P and VAT

Sounds Great



High Quality SCSI Hard Disc Upgrades At Affordable Prices



The Ecole range of hard disc upgrades is designed to be plug in and go. The system includes a 16 bit * SCSI controller. Each system has been tested at each stage of its manufacture, and has been given a final rigorous test to ensure that it meets our high standards.

The SCSI controller includes the Acorn CDFS and the system includes all the components you require to fit the system. The hard disc system comes with easy to follow fitting instructions together with comprehensive SCSI manual.

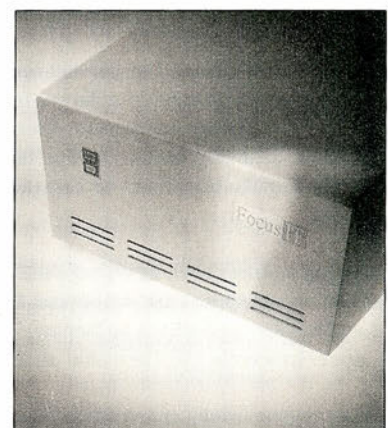
Price includes: Drive unit, controller card, (SCSI and CD filing systems), internal mounting kit, SCSI utilities disc, manual and full fitting instructions.

The Ecole range of external hard disc upgrades is designed to be plug in and go. The system includes a SCSI controller which in turn includes the Acorn CDFS filing system. Every hard disc system has been tested at each stage of its manufacture, and has been given a final rigorous test to ensure that it meets our high standards.

The hard disc unit is housed in a metal case together with a switch mode power supply, and a low noise fan, and is fitted with industry standard SCSI in and out connectors. The attractive case is stove enamelled and colour matched to the Acorn computer and comes complete with a round shielded SCSI cable.

Price includes SCSI utilities disc, manual and full fitting instructions.

Please Note * A3000 series have an internal 8 bit SCSI card.



Introductory Offer 120 Mb Internal hard disc and SCSI Controller only £299 plus VAT



SHARPEN UP YOUR IMAGE

CALLIGRAPH

A4-1200

Direct drive laser printer

With the highest resolution printer available for Acorn computers

The Calligraph A4-1200 – the highest resolution printer available for Acorn RISC machines.

This very affordable direct drive laser printer is the latest addition to our existing range of 300 dpi A4 to 1200 dpi A3 printers. The engine is hardware enhanced to 1200 dpi, giving perfectly smooth characters and curves; print quality is further enhanced by microfine toner. The printer utilises the latest in laser technology giving very sharp and clean output with virtually no toner splatter or banding.

The A4-1200 allows you to vary the resolution of the printed image depending upon whether you need speed or quality: 300, 400, 600, 800 and 1200 dpi resolutions are available. The higher you push the resolution, the greater the number of greyscales the engine can display... no more image degradation when you raise the resolution.

Consumables are long-lasting – photoconductor kits last for 30,000 pages and toner sets 15,000 pages at 4% coverage, making it a very economical printer engine to run. Available in either single bin or dual bin formats, this compact desktop laser printer is quick... it spits out pages at 8 ppm. The paper bins hold 250 sheets each. That's an hour of printing without even filling the paper trays!

The printer is supplied complete with all consumables, cables and documentation as well as RISC OS printer driver software for Acorn RISC computers.

*** Limited offer
£999**

Easy to use software

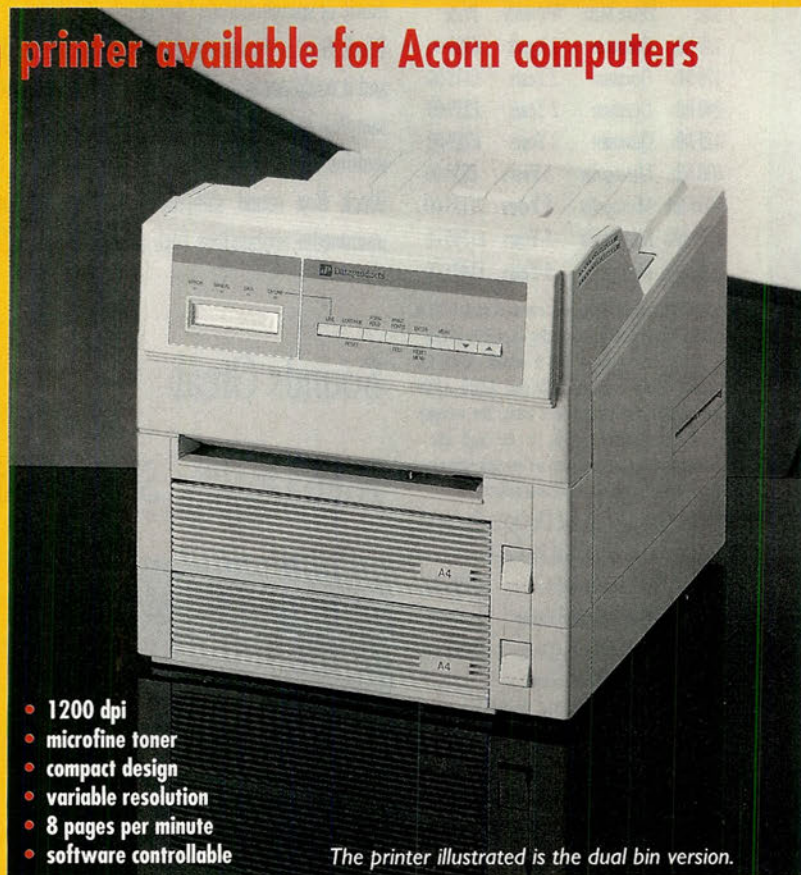
The new printer driver software drives all the current Calligraph printers and includes many features required by professional printers and publishers producing final camera-ready copy. The software supports variable screen density – between 30 and 170 lines per inch screens are ideal – more can be designed by you.

Gamma correction is used to correct for varying density effects experienced when printing to different materials, and can also be used to perform some image correction when printing poorly scanned sprites. User-defined greyscale lookup tables perform special effects such as altering the brightness or contrast of a page, to give the output more 'snap'.

Typesetting features such as wrong-reading (mirrored) pages, negative pages and virtual sprites are supported. For quick proofing, sprites and fonts can be printed without halftoning. These features perform a level of image enhancement not available on any other printer.

The laser engine is fully controllable from your computer and printer status messages appear on your screen, this means not having to leave your machine to operate menus and buttons on the printer.

The A4-1200 will be demonstrated at the
World of Acorn computer show.



- 1200 dpi
- microfine toner
- compact design
- variable resolution
- 8 pages per minute
- software controllable

The printer illustrated is the dual bin version.

*** Price for orders before 31 October 1993 (single bin version).**

Calligraph laser printers need no extra expensive memory or fonts (unlike PostScript or LaserJet type laser printers) and produce complex pages of text and graphics in tens of seconds, rather than up to 20 minutes or more required by other printers.

CALLIGRAPH
TQ-1200
Direct drive laser printer

**Also available – A3 1200 dpi
laser printer and plate-maker**

An integral part of the Acorn Publishing System, the Calligraph TQ-1200 produces camera-ready copy in a fraction of the time to typeset similar work. Driven by the same software as the A4-1200, it has all the features of that printer, plus control over the laser power and transfer bias for printing to non-paper materials. Calligraph specially modify this engine to print reliably on all materials. The printer is an 8 ppm laser unit capable of printing to paper, transparencies and polyester printing plates. All standard sizes from A6 to oversize A3 are supported. An optional second paper tray unit and automatic paper feeder are available to supplement the manual paper feeder.

CALLIGRAPH

Ask the average man in the street what he thinks about programming, and you'll get one of two answers. The first is that programming is really glamorous, and programmers are gifted craftsmen, creating works of art with which they astound the world. The other is they should experience sunlight more often.

It doesn't matter your school of thought: there is no doubt programming has its problems. Especially programming for a multi-tasking system, like Risc OS. The idea is that your program should sit there in its own little world, shut away from other applications so it doesn't interfere with the rest of the system, great if you're using the system, but not if you're trying to track down that little bug in your own application that gives you a 'Bad vector release' error and hangs the system.

It's traditional that at this stage the reviewer says 'enter so-and-so', and who am I to buck tradition? Enter *Vigil*.

What does it do?

Vigil is tricky to describe. Unluckily for the poor devil who has to write the adverts, it doesn't fit into any neat categories like 'document processor' or 'image manipulator'. The best I've managed to come up with is 'application workspace editor' which, if anything, undersells the product. *Vigil* is aimed at the programmer writing multi-tasking applications in Basic or Assembler (or C, I suppose) and is one of those 'can't live without it' applications.

The first thing you have to do is register your application with *Vigil* by dragging it to the iconbar: the application is run, and the main *Vigil* window pops up. It looks good, with Rheingold's trademark blue and green borders as in its other products; trivial though it sounds, if you're going to spend hours debugging your masterpiece using *Vigil*, you want it to be clearly laid out.

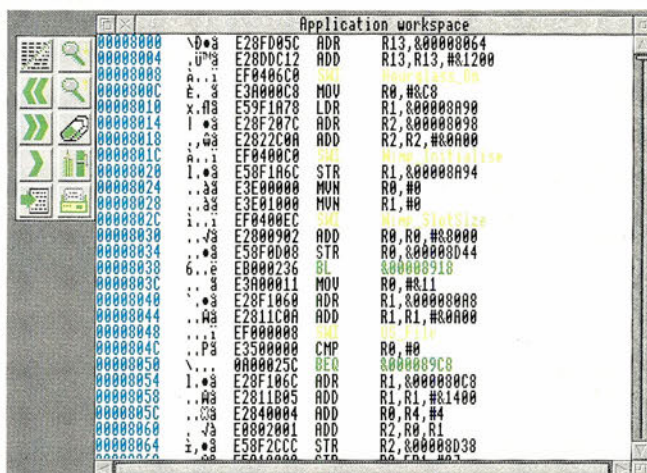
From the main window bring up the workspace display, the poll filter, the variable displays and the timer. Sounds great, but I can't think when a stopwatch would be useful when writing programs. Still, it's there if you need it.

A VIGIL TO KEEP

A hard product to describe, this one. Suffice to say Mark Moxon now can't live without it. Find out what *Vigil* is and why it's a must-have

Static variable list					
B%	2314	(8000090A)	N%	710312020	(82A560054)
A%	286703874	(81116C102)	O%	-2049510032	(88506F250)
B%	286700026	(81116B1FA)	P%	286703800	(81116C100)
C%	286675051	(811165060)	Q%	1045561900	(83E52022C)
D%	286736723	(811174153)	R%	814104600	(830864020)
E%	286663114	(8111621CA)	S%	286691428	(811169064)
F%	973492322	(83A065062)	T%	1228288453	(8493631C5)
G%	286736405	(811174065)	U%	944132195	(830465063)
H%	-2118696844	(801B74074)	V%	286712352	(81116E220)
I%	1359368300	(851065074)	W%	1036394904	(83DC62198)
J%	286716465	(81116F231)	X%	1298551307	(840665200)
K%	286736844	(8111741CC)	Y%	286691689	(811169169)
L%	1207099854	(847F2E1CE)	Z%	286679145	(811166069)
M%	790970790	(82F2541A6)			

Displaying variables: possibly the most useful thing you can ever do



The disassembly window, complete with its sexy little toolbox

Space to work

For the Basic programmer, the variable displays will be well justify the price alone. You can bring up a window containing the values of all the variables the application has defined, so you can tell what's going on while your program is running. This is so much more flexible

than the normal method of putting statements in your application to print out variables at crucial times, and once you've used this feature, you'll never look back.

For Assembler programmers, there isn't such an easy way of showing variable values, mainly because Assem-

bler doesn't have variables in the usual sense of the word. Assembly programs store values in certain locations, and this is where the workspace display comes in handy.

An application's workspace is the memory that it occupies in the machine, and *Vigil* displays it in a scrollable window, updating it when you want it to. The display can show either a hexadecimal dump of the memory slot, or a disassembled listing if you want.

The window has a toolbox pane attached to the top left-hand corner which allows access to the various tools available. As with all good editors, you can search through the workspace, matching bytes, words, mnemonics, SWI calls, and strings, and you can go to a specific address within the workspace. It is here that you can alter the contents of the workspace, though this is something you should only do if you feel confident: get it wrong, and you could easily hang your machine.

The poll filter is another really useful idea. It allows you to display the poll reason codes your application receives in a scrolling window, which is exceptionally handy if you have an application which doesn't seem to be responding correctly to the environment around it. You can even choose which poll codes should be displayed.

The rest...

There are plenty of other useful little features that *Vigil* provides, but the most useful is the ability to display information about any modules you have got loaded. For any module you can disassemble its code, display its workspace, and list its SWIs and its star commands.

Like all good products, there are loads of little bits and bobs you'll find useful, so I won't waste space detailing them all here. Suffice to say *Vigil* is a godsend, and if you're a multi-tasking programmer, buy it.

Product details

Product: Vigil
Supplier: Rheingold Enterprises
Tel: (0925) 210657
Price: £24.95



VAT reg. 634 2950 40

THE Datafile

71 Anson Road,
LOCKING,
Weston-Super-Mare,
Avon,
BS24 7DQ.

(0934) 823005
Tel./Fax. & Answerphone
Phone any day, even Sundays,
not later than 9 pm.

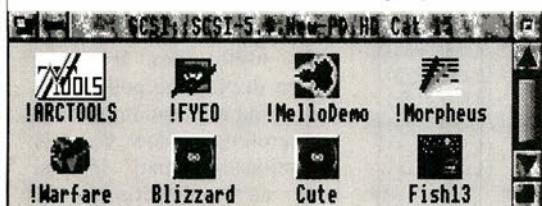
We can offer you over 900 archived discs of PD and Shareware. Prices start from £1.15 including p&p plus VAT.



Catalogue 15 contains a staggering 1900k. 850k of PD games, fractal apps, utilities, animation and music. The other 1050k makes up the most comprehensive Public Domain catalogue available. The HD version has a further 1230k made up of Utilities, Demos and a new flight simulator !Warfare.

DD Cat 15 £1 - HD Cat 15 £1.50

**Extras disc for DD users 50p
inclusive of VAT and p&p.**




The Medieval & Gothic Font
Collection
Plus
Draw Fonts & Period Draw Art
Issue II

All the five fonts now contain the fully extended character set plus extra decoration. This is now a four disc collection.

Existing users can update their package by sending £2 fully inclusive.

£37 fully inclusive

Letraset® Academy Engraved £10

Letraset® Balmoral £10

ITC Bauhaus® Light Medium
Demi Bold & Heavy £30

ITC Eras® Light Book
Medium Demi
Bold & Ultra £35

Letraset® Freestyle Script & Script Bold £15

Letraset® Gillies Gothic £10

ITC Isadora®
Regular & Bold £15

ITC Manhattan® £10

Letraset® **MASTERCARD** £10

Letraset® Quixley £10

Letraset® **SINALOA** £10

ITC Panache® Book Book Italic
Bold Bold Italic
Black &
Black Italic £35

URW Palladio® Regular Regular Italic
Medium Medium Italic
Bold & Bold Italic £35

Top quality typefaces licensed from two of the worlds leading fonts houses, ITC & URW. You can buy with confidence. Each font is fully scaffolded and hinted using our in house hinting tools. They are exceptional value for money.

RISC OS 2 & 3 versions are on each disc.

Please add £1 p&p to all font prices and then add VAT

IN BRIEF

Basic programming on the Acorn and a package that replaces your messy grey splodges with neat grey lines

BOOK REVIEW

Title: Basic Wimp Programming on The Acorn

ISBN: 1 870336 53 4

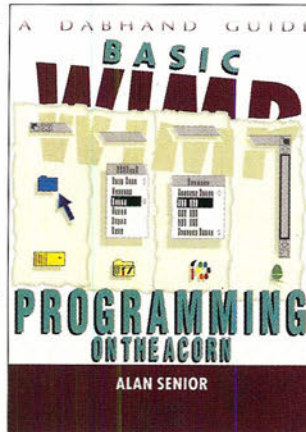
Supplier: Dabs Press Publishing, Price: £14.95

Hi there, Dabs Press, where have you been? The answer is 'late'. On the Acorn, a considerable proportion of users are going to be budding programmers, and these are precisely the people previous Dabs publications, both for eight- and 32-bit owners, have aimed at.

Most people, having reached deep into their pockets for the price of an Acorn machine, are reluctant to shell out for a leviathan like the *Risc OS 3 Programmer's Reference Manual*: authoritative, yes, but a little intimidating at 3220 pages and nearly a ton in price.

Hence Sigma Press' *Beginner's Guide to Wimp Programming* and Risc Developments' *Wimp Programming for All*. £12.95 each, enough to get you started, lots of example programs, and no assumption that you have at least a 2.1 in Computer Science. Indeed, one of our main criticisms was that these two titles erred a little too much on the side of simplicity.

So what can latecomer Dabs offer at £14.95 that the others can't? Well, for a start, 464



pages as opposed to SP's 177 pages and RD's 192. In fact, some of this is deceptive, because Dabs elects to put far fewer lines on a page than the others but it's still a lot more. With that much space, Dabs makes no assumptions

about the knowledge of the average reader – you could start reading this if you'd only just plugged in your new machine and sat down.

I do have my reservations. The long intro, plus

appendices, accounts for much of the book, leaving the real meat broadly similar in size to that in the other two books. But these extras cost a mere £2 more. Furthermore, this book looks like a professional product. The line-spacing looks a bit like padding, but it is well-structured, with clear page numbers, chapter headings and crossheads.

Risc Developments, though lacking in presentation, has a lot more to say about the knotty subjects of fonts, and real beginners may find Sigma's offering useful. But Dabs has gone for the whole range, from tyro to experienced programmer, so if you're only going to buy one book, buy this one.

Fin Fahey

HATCHBACK

Supplier: 4Mation

Tel: (0271) 25353

Price: £35.00 + VAT (includes site licence)

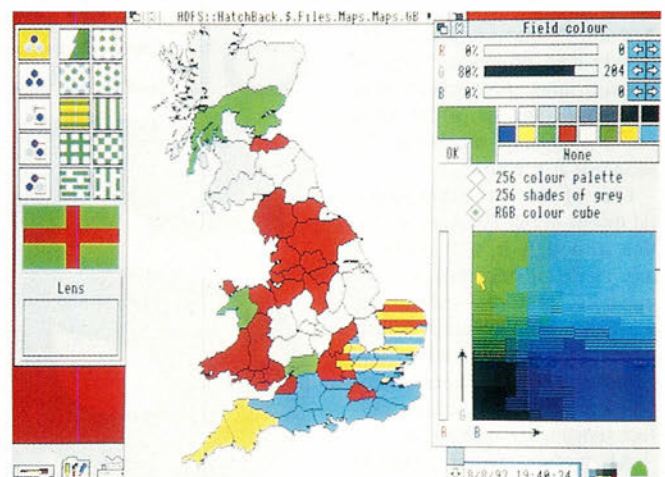
Monochrome printing can be disappointing. You spend days creating designs in reds, greens and dark blues and when they come out of the printer, you get a sploody black mess.

Hatchback is a utility for *Draw* and *Poster* which tries to solve this by replacing areas of solid colour with hatched shading patterns. 4Mation calls

them chloropleths. Operation is simple. When you drop a *Draw* file on to the program icon, a window opens containing your picture and a toolbox of fill patterns and 'target' icons. To modify a drawing, you choose a pattern from nine varieties of lines, dots, cheques and dashes, then select *Draw* objects. The target changes to cross-hatching.

Target objects can be defined in five ways. In Local, the only object changed is the one under the cursor; Global, changes all objects of a given colour; and there are three drag

box settings – Within box, Beneath box and Outside box. Chloropleths can be modified using three parameters: angle, intensity and frequency. Angle rotates patterns; density alters ratio of foreground to back-



We apologise to viewers in the north of Scotland for the loss of picture

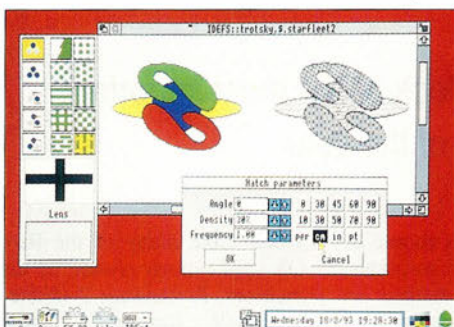
ground colours and defines darkness in black-and-white work; frequency sets the grain of the pattern. You can also generate coloured patterns from a 256-colour palette.

Hatchback is very good at producing coarse shading of the sort you might use for black-and-white presentation of graphs and diagrams for example, but, at the millimetre

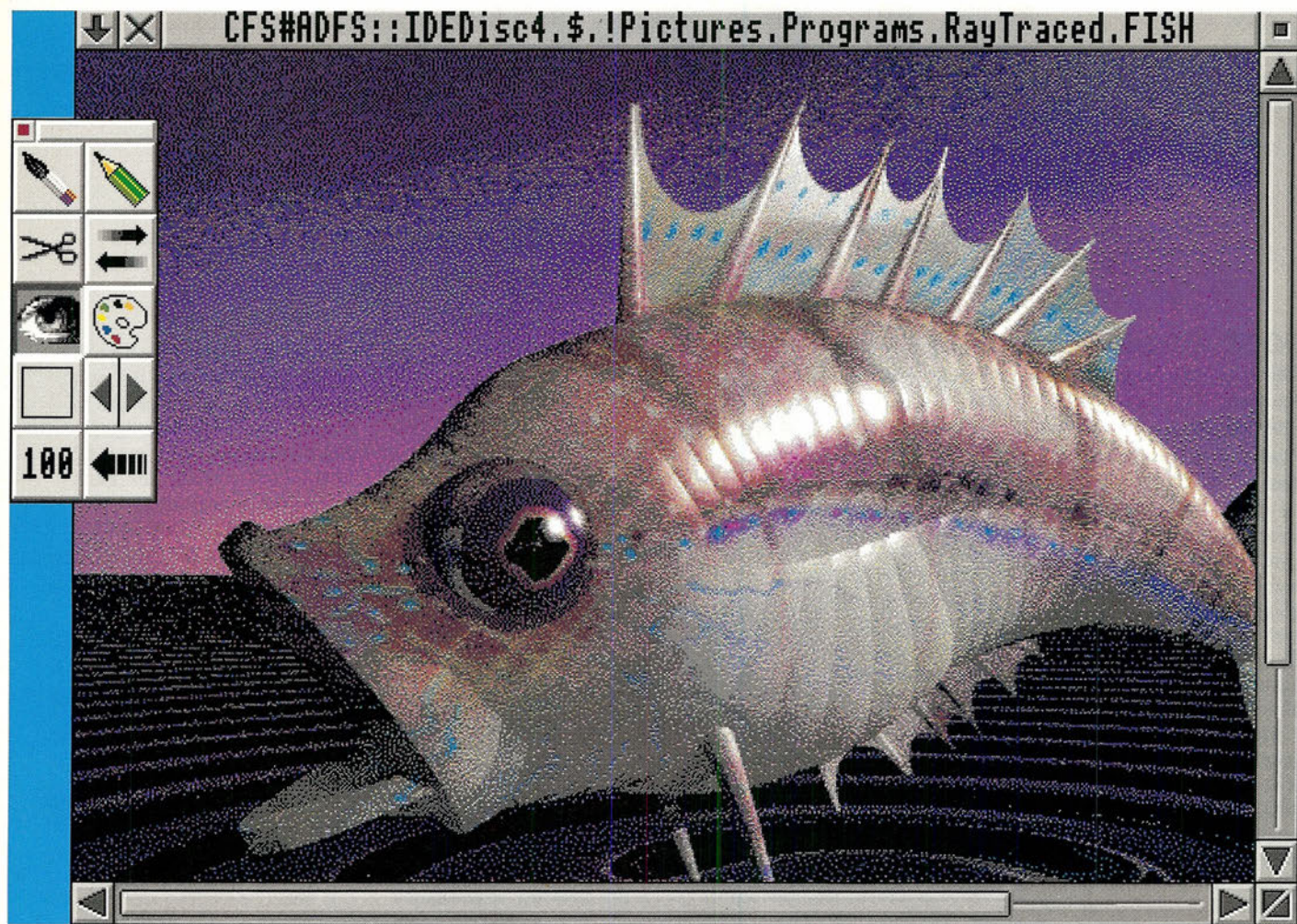
frequencies that are required for half-tone and similar effects, it gets very slow, very memory-intensive, and creates some very big files.

If you are going to be doing a lot of display work, *Hatchback* could be very useful but, for high-resolution uses, I would advise you to buy a big machine to go with it.

Richard Garrett



Hatchback converts pictures into shades of grey



Whereas *ProArtisan* was an 'enhanced' version of *Artisan*, *ProArtisan 2* is a completely new program. Users of *Artisan* and *ProArtisan* will identify a number of the tools but will barely recognise the program as a whole.

One of the most fundamental things about *ProArtisan 2* is that although it will work in any mode, it does not, in fact, generate pictures using any particular mode. This is a little odd to understand (and explain) at first, although once you know why, it makes perfect sense to do it this way.

All pictures being edited in *ProArtisan 2* are held 'internally' as high-resolution (square pixel) screens with 24-bit palettes. This is useful if you have a graphics card fitted to your machine, but more on this later.

Once *ProArtisan 2* has loaded, you have the option of loading an existing picture in or creating a 'canvas' onto which you can draw. Like *Impression II* with documents, *ProArtisan 2* can hold any

State of the art

At last *ProArtisan 2* is here. We look at the most important graphics release of the year

number of pictures at one time, as long as there is sufficient memory.

Creating a canvas is simple and is just a case of providing

ProArtisan 2 with a couple of dimensions. As well as pixels, canvases can be defined in terms of inches or centimetres and a selection of sizes is pro-

vided. Like many of the Risc OS applications around at the moment, *ProArtisan 2* utilises a small toolbox window (shown above) containing ten

icons. Rather than one large menu, *ProArtisan 2* changes the menu depending on what 'tool group' is selected on the toolbox. There are five 'tool-groups' with five corresponding menus, namely Paint, Draw, Sprite, Input/Output and Process. The five remaining

icons cover the palette, the 'frisket' (more of which later), screen magnification, and the undo tool.

What's new?

Virtually every part of the original *ProArtisan* has been improved or developed in the new version. Old faithfuls such as the Magic Brush are still present but have been updated to fit in with the new features.

The Palette is much the same as in the original *ProArtisan*, but now allows you to choose the 'amount' of colour that is applied to a picture by means of an opacity slider. This ranges between 0 and 100 and if used correctly, allows very subtle colour changes to be carried out.

Another addition to the palette is the picker, which contains the last sixteen colours used in a picture. This helps considerably when you're using a varied set of colours and is also used by other tools in *ProArtisan* such as dapple and diffuse.

As well as colour, you can now paint 'textures' onto a picture. A texture is effectively a repeating pattern made up of four greys, which when 'painted' over a picture, applies that texture as either light or dark. Sixteen different textures are provided ranging from canvas to

Virtually every part of the original *ProArtisan* has been improved or developed in the new version.

Painting textures on to a picture

basket-weave.

A number of other 'paintable' effects include smudging, dapple, smearing and diffusing. All four tools produce

results that their names would suggest, with smudge and smearing giving a kind of water-colour result, while dapple and diffuse produce a stippled look.

Drawing tools are similar to those in the first release of *ProArtisan* but now use the Risc OS 3 (or Risc OS 2) Draw module to produce the actual lines. This means it's now possible to create solid filled shapes as easily as you would in Draw. Curves have been enhanced so they automatically auto-smooth as you moving the pointer around.

A rather novel tool has been added to simplify the cutting out of sprites. The Magic Wand (not to be confused with the Magic Brush) lets you cut out an area of a picture just by pointing and clicking on it. It works by 'looking' around the edge of the area for what it considers to be pixels of similar colour or shade (the background). The magic wand is not infallible but will work in a surprising number of situations where free-hand cutting out is near-impossible.

Once chosen, sprites are stored in a sprite pool: a special area of memory that can be saved-out separately to the canvas. Any number of sprites can be stored in the pool depending on the amount

The competition

Both *ProArtisan* and *Image Pro* run in the desktop environment and provide similar tools for creating and manipulating pictures. Each has its pros and cons. *ProArtisan* has the option of using any colour as an opaque colour but *Revelation ImagePro* is limited to just six, plus black-and-white. *ImagePro* does have a slightly simpler front end.

I've used *ImagePro* considerably in the past but *ProArtisan 2* now looks like the better option. One of the obvious differences between the two packages is the price: £135 for *ProArtisan 2* and £166.85 for *ImagePro*.

If you are a first-time buyer, the best way to choose between them is to see them actually up and running. This month's cover disc contains a full demonstration version of *ProArtisan 2* for you to peruse. *Revelation ImagePro* will no doubt be on show on the Longman Logotron stand at the forthcoming World of Acorn Show at Wembley: an ideal opportunity to compare the two.



Top ten

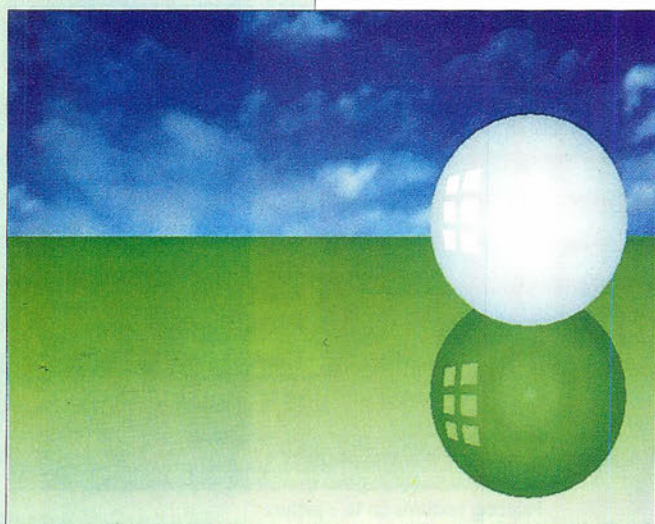
With so many features available, it's tricky to come up with a top ten, but here it is nonetheless: our favourite features in *ProArtisan 2*...

- 1 Colour opacity – any colour can be applied to a canvas at any 'level' between 0 and 100.
- 2 Magic wand – Sprites can be cut out of a picture just by pointing and clicking on them.
- 3 Distort – Sprites can be squashed into any four-sided figure, making perspective effects easy.
- 4 Frisket – Complex masks can be created easily to protect any area of a canvas.
- 5 Emboss – A rather neat tool giving a kind of engraved effect.
- 6 24-bit palettes – Colours for a picture can be chosen from a selection of over 16 million shades (when a Colour Card or G8/G16 card is fitted in your machine).
- 7 Fills – Virtually any fill is possible. Graduated fills are particularly effective with the editable palette.
- 8 Textures – 'Depth' can be applied to a picture with many effects ranging from Canvas to Concrete.
- 9 Generic Filter – A customisable filter lets you design global effects for a picture.
- 10 Colour/Grey Shift – Colour and grey levels in a picture can be 'turned up or down'.

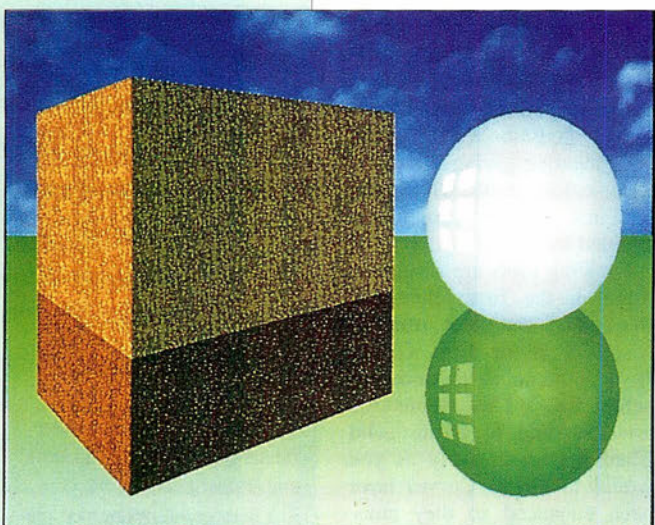


The sprite pool containing a sprite cut out with the magic wand

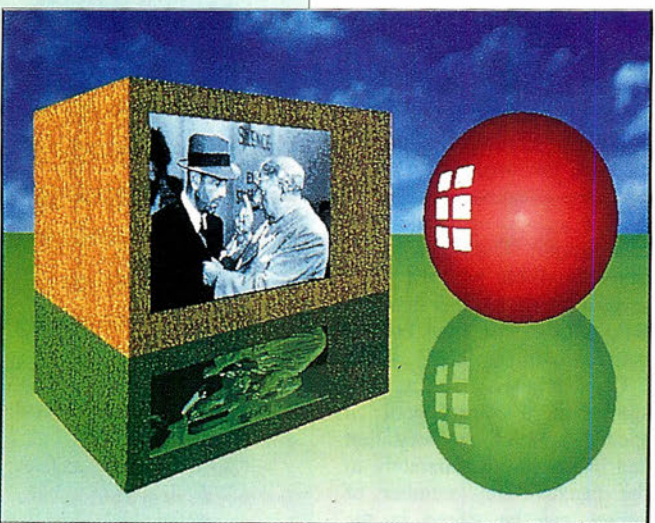
Walk through



The first two stages show how realistic solid shapes are created using shading and perspective



Below shows how a separate picture can be superimposed onto a solid object



of memory present in your machine. Sprites can also be loaded into the pool simply by dragging them from the relevant filter window.

In addition, sprites can also be painted onto the canvas using any one of twelve different blends: they can be made to fade from left to right, top to bottom, or even emanate from a central position to give a 'misty' effect round the edges.

I've already mentioned that *ProArtisan 2* holds pictures internally as high resolution images with 24-bit palettes. A standard Acorn machine is unable to utilise these and *ProArtisan* saves files in Mode 21 as default. You can however, convert the internal image to any mode you wish by typing in the relevant number at the time of saving.

If you have either Computer Concepts' Colour Card or one of State Machine's G8/G16 range of graphics cards fitted to your machine, you can edit the palette so that it contains any colours from a selection of 16.7 million. There is even the option of choosing two colours, after which *ProArtisan* will select the colours in between. This allows you to easily create pictures with 256 greyscales.

Image processing

Image processing is a particular area where *ProArtisan 2* has undergone a major revamp and the choice of effects and processes that you can apply to a picture could fill an article on its own.

Filters include the usual lighten, darken, contrast, plus a global anti-alias (similar to smudge in the Painting section). Two further tools give control over colour and grey levels in the current picture. These allow you to convert colour images to mono.

The Effects are a completely different ball-game and provide such tools as Emboss which turns any picture into a kind of engraving. Other notable effects are a generic

filter which allows you to customise the process by defining what happens to each pixel adjacent to the pixel being operated upon. A few filter styles are provided under names such as Vaseline, Blobby, Darken and Lighten. No option is provided to save user-defined styles but it's easy to re-create them if you note them down before shutting down *ProArtisan 2*.

The final 'major feature' included in the process menu is frisket creation. The word frisket refers to a kind of stencil used in traditional printing and in *ProArtisan 2* can be thought of as a mask. Friskets are defined by colouring in a special frisket canvas. When the frisket is turned on, all areas shaded in (on the frisket) are left untouched (on the canvas) by any painting, drawing, sprite or process action.

The Verdict

In the time I've had to play with *ProArtisan 2*, I can happily report that it's the best art package around at the moment for the Archimedes. *Revelation ImagePro* from Longman Logotron comes (a very close) second, but *ProArtisan 2* just pips it to the post with its list of features.

Ease of use is an important factor with a new program and if you are familiar with the Risc OS desktop, you should have no problem getting to grips with *ProArtisan 2* and full compatibility is ensured.

£135 is fully justifiable. Owners of other art packages over £35 can trade in their old program for *ProArtisan 2* at £87.50, making it even more desirable.

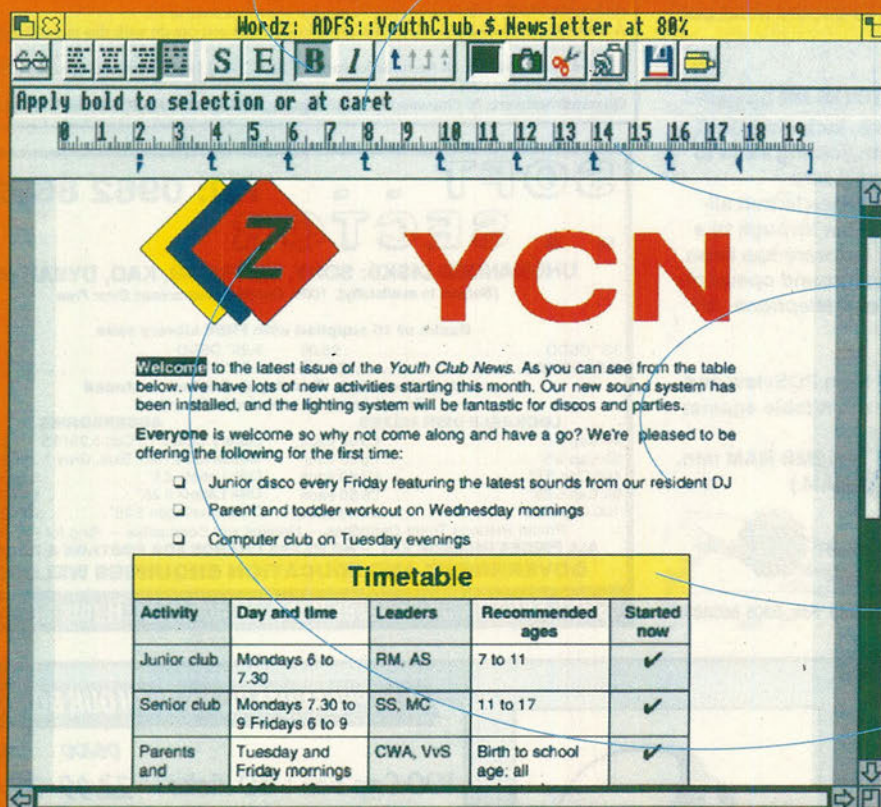
Product details

Product: *ProArtisan 2*

Supplier: Clares Micro Supplies Ltd

Tel. (0606) 48511

Price: Single-user version £135; upgrade from any Clares art package £67.50; upgrade from any other art package over £35 - £87.50.



At last, the word processor the Archimedes has been waiting for. A program that's so easy to use you'll be able to create great-looking documents the first time you use it. The facilities used most are in the *button bar*, and the *status line* gives you instant feedback. Just click and drag in the *ruler* to set margins and tabs; click on a button to cut and paste - it's that easy.

Wordz has all the features you'd expect from a state-of-the-art word processor. The powerful style editor gives you complete control over all aspects of your text; *font*, *spacing*, *margins*, and *colour*. Unparalleled control over *tables* including dragging to resize columns and rows. Speedy check-as-you-type or whole document spell checking. Import *pictures* and text from other programs, including PipeDream.

Wordz is the first of a family of programs which share the same easy user interface and include dynamic data linking. The spreadsheet Resultz will be available in mid-1993.

Wordz costs £99+VAT. "Is it easy to use? It's falling-off-a-log easy to use."

word[®] Z[™] 1993...4...

for a free Wordz brochure, complete and return this coupon

name

address

postcode

COLTON software

2 Signet Court, Swanns Road,
Cambridge CB5 8LA
Telephone 0223 311881
Fax 0223 312010

PDSview is a professional image processing application that works in full 24 bit colour resolution. It has been entirely rewritten with a new manual. New features include full colour separation of bit mapped images, and batch processing command scripts to make complicated processes easy to carry out even for the raw beginner. PDSview is equally at home processing digitised images from any source including your video camera or photo-CD and in addition Spacetechn can supply a wide range of remotely sensed spacecraft raw image data on CD or even your own live hook-up to the weather satellites. Please write or telephone for our colour brochure.

PDSview is the computerised equivalent of a colour processing laboratory and is almost essential if you want to get the most out of your G8 or CC colour expansion card.

Spacetechn's **Weather Satellite Stations** are compatible with all current meteorological satellites, including GMS in Australia/NZ. They are turnkey systems with nothing extra to buy and can even be supplied complete with an Acorn workstation and full installation. There are packages to suit all needs from a simple upgrade to an existing station through to a total professional solution. The Weather desk software has been upgraded to include animation cross-fade, background operation and full colour card compatibility. Please write or telephone for our colour brochure.

A 3 disc demo set illustrating sample output from PDSview and The Weather Desk is available for only £5.00 refundable against purchase of either package.

For all Acorn 32 bit machines with RISC OS 3 and 2MB RAM min. Animation Demo Discs require 4MB RAM.)

spacetechn
space science resources

21 West Woods, Portland, Dorset DT5 2EA. U.K. Tel. 0305 822753 Fax. 0305 860483

KEYSTROKE

The most powerful program ever written

Do you tire of all those unnecessary repetitive menu selections, wish that your favourite program had more Control key type short cuts? Or just tired of moving and resizing windows to the same position every time you use a program? Well a revolutionary utility has been developed for the Acorn Risc OS machines. This program can actually remove all of those tiresome or repetitive mouse clicks with just one key press or icon click!

Believe it or not, *Keystroke* can actually control any Risc OS program. Imagine a single key press to perform 'Group frames' in Impression, perhaps set 'Text Repel' in a frame to a specific value or a quick key press to turn a frame to the transparent colour! Ctrl+T could bring up !Paint tools window, F1 to mount a disc, F11 to bring up the task display, or F3 to save a file, or save the file automatically every 15 minutes. *Keystroke* can perform these and many more amazing things! *Keystroke* also comes with a !Buttonbar application that allows keystrokes to be used by clicking on an icon. Create your own tools window! A complete Impression tool window is included!

Acorn User - "Try it, it makes life a lot easier!"

Archimedes World - "damn clever, easy to use, best of its kind, 5 out of 5!"

A demo disc is available for £1.00, see for yourself what you can do with this incredible program.

Keystroke is suitable for all Archimedes running Risc OS 2-3.11 and is offered for only £29.95 fully inclusive. No VAT.

Quantum Software, 35 Pinewood Park, Livingston, EH54 8NN, Tel: 0506 411162 after 6pm.

SOFT . . . Tel: 0962 863225 .. SECTOR

UNBRANDED DISKS: SONY, VERBATIM, KAO, DYLAN etc.
(Subject to availability). 100% Certified Guaranteed Error Free

Packs of 10 supplied with FREE Library case

3.5" DSDD	£5.00	5.25" DSDD	£3.82
3.5" DSHD	£7.60	5.25" DSHD	£6.11

Labels included Envelopes & labels included
Enquiries welcome for bulk orders

LOCKABLE DISK BOXES



40 Cap 3.5"	£5.95 each	Library Cases 10 Cap 5.25/3.5"	£1.20 each
80 Cap 3.5"	£6.95 each	Mouse Mats Red, Blue, Grey	£2.75 each
100 Cap 3.5"	£7.40 each	Disk Labels 3.5"	£1.40 per 100
50 Cap 5.25"	£6.50 each	Disk Labels 5.25"	£1.80 per 100
100 Cap 5.25"	£7.40 each	Disk Envelopes 5.25"	£3.65 per 100

Printer Ribbons Toner Cartridges — Original and Compatible — Ring for Prices

ALL PRICES INCLUDE VAT — NO EXTRA CHARGE FOR POSTAGE & PACKING
GOVERNMENT AND EDUCATION ENQUIRIES WELCOME

SOFT SECTOR 58 Andover Road, Winchester, Hants SO22 6AG

PREMIUM BULK 3.5" DISKS

	DS/DD	DS/HD	
25	10.49	16.49	
50	18.49	28.49	
100	32.99	52.99	
200	64.99	102.49	
250	79.99	124.99	
500	158.99	234.99	

ALL DISKS ARE FULLY GUARANTEED
AND ARE COMPLETE WITH LABELS

3.5" SUPERIOR LOCKABLE DISK BOXES

Qty	100 Cap.	140 Cap.	Bank Box
1	4.49ea	6.49ea	9.95ea
2	4.39ea	6.39ea	9.75ea
4	4.19ea	6.19ea	9.50ea
6	3.99ea	5.99ea	9.25ea

All products are subject to availability

All prices include VAT.

Please add £3.50 p+p
for disks and boxes.

E&OE.



**SNAP
COMPUTER
SUPPLIES LTD**

HOTLINE

**0703
457111**

3.5" PREMIUM DISKS WITH OUR BOXES

	DS/DD	DS/HD
100 Cap. box + 50 disks	22.49	32.49
100 Cap. box + 100 disks	36.49	56.49
140 Cap. box + 100 disks	37.99	57.99
Bank box + 50 disks	27.49	37.49

REBBS - POST FREE

Full Mark Brand	2 off	4 off
	PRICE EACH	
Citizen 120D/124D Swift 24	2.75	2.55
Citizen Swift 24 Colour	13.95*	
Panasonic KXP 1080/1123/1124	3.25	3.05
Star LC10/LC20	2.60	2.40
Star LC10-4 Colour	5.90	5.70
Star LC24-10	2.95	2.75
Star LC24-10 Colour	10.95*	
Star LC200	3.00	2.80
Star LC200 Colour	10.95*	
Star LC24-200	2.95	2.75
Star LC24-200 Colour	10.95*	
Ribbon re-ink	12.95	

Minimum order - 2 ribbons, except those
marked with an asterisk *

COMPATIBLE INK JET REFILL

HP Deskjet 500 Double Refill	9.95
Canon BJ10E Double Refill	9.95



SNAP COMPUTER SUPPLIES LTD Fax: 0703 457222

Unit 16, The Sidings, Hound Rd, Netley Abbey, Southampton SO3 5QA



According to the old song there are more questions than answers. Not in Acorn User there aren't

QUESTIONS & ANSWERS

Q Are you sure that you can't use Risc OS 2 *Edit* to create and edit Basic programs, as you state in your Back to Basics article in your August issue? I'm positive I've seen articles on how to do it, but I think that it is not quite as straightforward as using Risc OS 3 *Edit*. Any ideas?

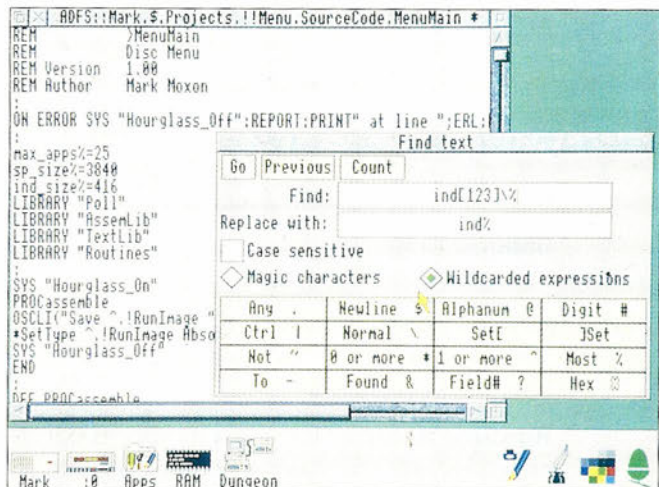
J Whittaker
Surrey

A It is possible to edit basic programs using Risc OS 2 *Edit*, but it's a bit of a pain and cannot really be recommended. The problem is that Basic programs are in so-called 'tokenised' form, which means that Basic keywords like PRINT and REM are stored not as words, but as single-byte tokens. *Edit*, however, deals not with tokens, but with text, so if you load a Basic program into Risc OS 2 *Edit*, you will just see a mess of bytes and the odd recognisable string or

variable name. Risc OS 3 *Edit* contains a routine to convert tokenised Basic into de-tokenised text, so it is readable and editable in the usual way.

However, here's the simplest method to use if Risc OS 2 *Edit* is all you have. Create your Basic program as a text file, complete with line numbers, and save it to disc. Next, change the file type to Basic by using the SetType command: do this by pressing F12 and typing SetType ADFS::HardDisc.\$tm

p.MyProg Basic or similar, depending on where you have saved the program. What you will now have is a file which looks like a Basic program, but is, in fact, a de-tokenised file. You can run it like a normal Basic program by double-clicking, and you can load it back into *Edit* by dragging it to the iconbar, but there is one important point to make:



Risc OS 3 *Edit* is so much more friendly for programming than Risc OS 2

never save the program from within Basic using the SAVE command, as this will overwrite the file with a tokenised Basic program, and loading this into *Edit* will produce tokenised gobbledegook.

An alternative method is to purchase an application which converts Basic programs to and from text, so you can load tokenised programs into *Edit*. The public domain contains a number of utilities which perform this job, and there are a number of editors around which can edit Basic programs directly (4Mation's *DBEdit*, Stallion's *StrongEd*, Risc Developments' *DeskEdit* and the public domain program *Zap* are the most popular). It's still very wise to upgrade to Risc OS 3, though.

Q I have noticed that when I load a succession of large commercial applications, each of them claims a large chunk of Ram from the module

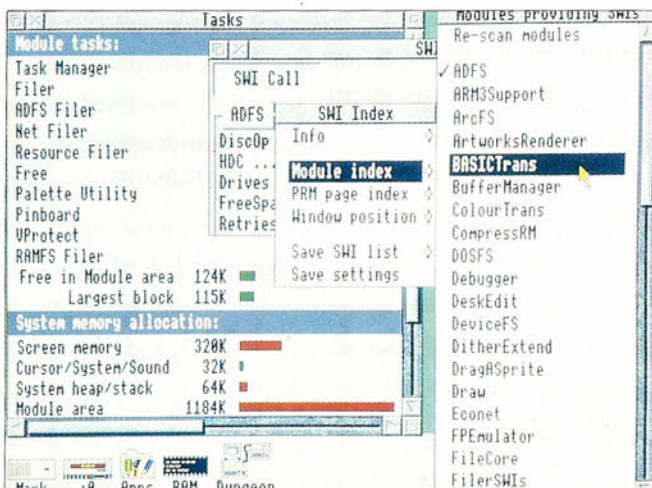
area. When I quit a program the modules are left behind, even though they are no longer required, claiming a large chunk of useful memory space.

I have tried using the RMKill command to remove the unwanted modules, but the protected Ram within the module area remains unaffected. This can represent over 500K of wasted Ram inaccessible to subsequent programs, significantly impairing the multi-tasking capability of the computer. The only way I've worked out to remove the problem is to turn the machine off and on again.

Surely there must be a more elegant way of freeing up redundant module area Ram?

Ian Trimble
Nottingham

A When a module is killed, it is removed from the module area, but the other modules in the area are not shifted down to create more space, so removing



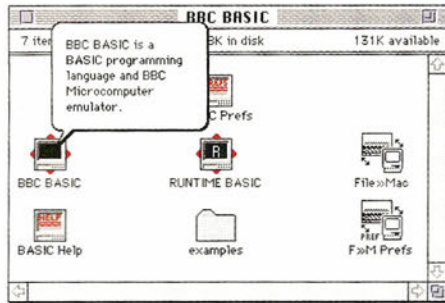
Modules can be very memory hungry, so manage them carefully

BBC BASIC Version 3

Programming language and Emulator for the Apple™ Macintosh™

Combines the power of the Macintosh ...

BBC BASIC 3 takes advantage of the advanced features of the Macintosh, and System 7, to provide an ideal environment in which to develop, test, and run your BASIC programs.

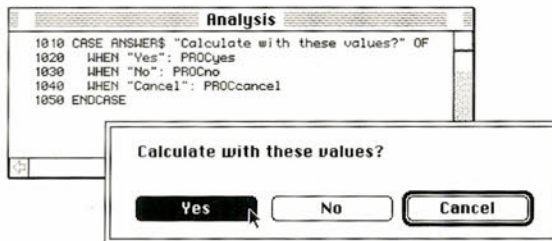


Balloon help provides instant information about the menus and dialogue-box options.

Save Graphics option saves the BBC BASIC graphics screen as a PICT file that can be loaded into other programs.

Runtime BASIC utility converts your BASIC programs into stand-alone double-clickable Macintosh applications.

Macintosh-style interactive editor provides a scrolling view of program listings with convenient cursor or mouse editing. You can work with any font available on your system and you can display keywords highlighted in bold for easy reference.



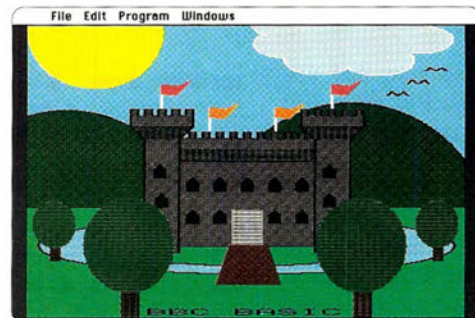
Macintosh Toolbox interface allows you to define your own menus, dialogue boxes, and scrolling lists using convenient BASIC keywords, and use the standard file dialogues for opening and saving data files.

Dynamic tracing and debugging lets you run or step through a program, highlighting each statement as it is executed, and you can display the values of any variables or expressions.

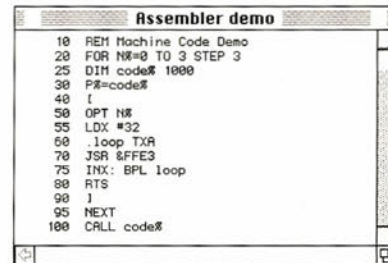
Comprehensive help system gives you instant information on keywords and operators, without interrupting what you are doing.

...with the best of the BBC Microcomputer:

BBC BASIC for the Macintosh gives you access to the foremost educational programming language in the UK, with the ability to run many programs originally developed for the BBC Microcomputer.



Emulates BBC Microcomputer graphics and screen modes, including Teletext. Work in full colour on an LC or Macintosh II, or grey shades on a monochrome Macintosh.



Built-in assembler and 6502 machine-code interpreter allows you to compile and run 6502 assembler programs, or machine code which you have loaded in directly.

Full emulation of the BBC Microcomputer Operating System including all the standard system calls and vectors, OSBYTE, OSWORD, *FX calls, VDU codes, function keys, sound, and DFS/ADFS commands.

Includes FileMac transfer utility to transfer programs and data files to or from an Acorn Archimedes or BBC Microcomputer.

HUMAN▼COMPUTER
INTERFACE · LIMITED

Human-Computer Interface Limited,
FREEPOST, Cambridge, CB1 1BR
(no stamp required if posted in UK)

Telephone: (0223) 314934. Fax: (0223) 462562

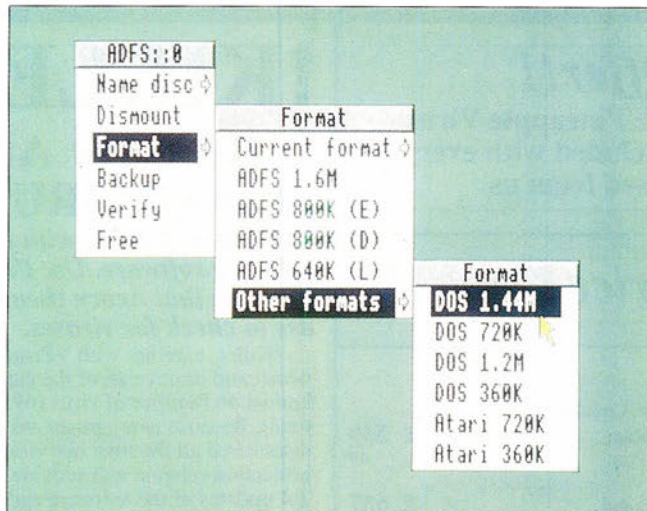
a module does not necessarily enable you to reduce the amount of Ram allocated to the module area. There is a command, however, called RMTidy, which goes through each module, kills it off (thus releasing workspace), moves it down, and re-initialises it. This is great if you are outside the desktop, but of course the Wimp is a module itself, so if you do an RMTidy from the command line (by pressing F12), you get the error 'Module is currently active'.

The only real way to claim back module space is to make sure you kill off all Ram modules, which is no easy task, and a reset is easier. It's not a bug in Risc OS as such, but it would be nice to be able to squash the module area when the desktop is active. C'est la vie, I'm afraid.

Q In March I bought an Acorn A5000, and I've now got a new Hewlett-Packard 550C colour printer. However, it only prints out in black-and-white, and I can't seem to make it print in colour at all. What's going on?

E Thompson
Cleveland

A The likeliest explanation is that you are using the monochrome printer driver supplied with your computer, rather than a special colour driver which you need. There are three main choices for the DeskJet 550C. Risc Developments sells a standard Risc OS 3 driver for the 550C at £15 + VAT. Ace Computing (now part of Oak Solutions) produces a ProDriver for the HP, costing £39.95 + VAT, which provides enhanced print quality and features such as printer spooling and colour separations. Finally, Computer Concepts produces the 550C TurboDriver, which speeds up printing speed phenomenally and provides a host of features, including background printing; the price is £49 + VAT.



A serious range of disc formats is available under Risc OS 3

Risc Developments is on (0727) 840303, Oak Solutions is on (0954) 211760, and Computer Concepts is on (0442) 63933.

Q I am having problems with an IDE hard disc I purchased for my A3000. Earlier on this year I also fitted a Risc OS 3.11 Rom upgrade, and when I click on the Free option for the Ram disc or floppy drives I get the new multi-tasking free space display. However, when I do the same with my hard drive, I still get the old Risc OS 2 display which does not multi-task and which hangs up the machine, stopping any file copying and so on until I click the mouse. This is really annoying: what's going wrong?

N Morgan
Southampton

A The problem lies with the software provided with your hard disc. When you buy an IDE hard disc, it comes with a built-in Rom which contains the filing system for that disc, and it is in this Rom that the code to display the free space map exists. A number of drives are still supplied with filing system code from the days of Risc OS 2, and don't make use of the multi-tasking capabilities of Risc OS 3.

Your only recourse is to contact the company which manufactures your hard drive, and ask if it has

upgraded its software yet: if it has, then you will be able to plug a new Rom into the drive and everything should work as expected.

Q If I upgrade to Risc OS 3, will I lose all the thousands of applications, programs and so on that I've got on my Risc OS 2 discs? Is there some way of formatting your Risc OS 2 discs for Risc OS 3 without losing the things that are on them?

Peter Martin
London

A This is a very easy question to answer: you will have absolutely no problem using the same discs you formatted on Risc OS 2 after you upgrade. In fact, the new operating system not only supports all the formats available to Risc OS 2 users (in other words ADFS E (800K), D (800K) and L (640K) formats), but also supports seven other formats. Of these, four will be accessible on your machine, which will not contain a high density drive; these are Dos 360K, Dos 720K, Atari 360K and Atari 720K. The other formats will be greyed-out on a machine without an HD drive; these are ADFS F (1.6Mb), Dos 1.2Mb and Dos 1.44Mb.

If you continue to format your discs using the standard ADFS E format, then this will ensure that your discs can be read and written to by any Archimedes running Risc OS 2 or Risc OS 3.

Q I wonder if you would be kind enough to help with a recurrent problem I have on my A3000. When I try to load a file from a disc, I sometimes get an error message similar to 'Disc error 10 at :0/00001400', for example.

This usually persists and has happened on different discs. Can you please help?

R E Withrington
Essex

A Disc errors are bad news: they basically mean that the disc has been corrupted in some way. The error message is made up of two parts: the error code (10 in this case) and the disc address (drive and sector numbers). Most disc errors are pretty fatal, and mean you have lost all or part of a file. Products such as *Archimedes Disc Rescue* from LOOKsystems (0603 764114) can save the day, but it's a good idea to know what the error is.

The error number will give a clue as to the possible fault, but there are two types of error number, depending on which disc drive controller you have fitted. old machines, like the A3000 and A4001 series, have a 1772 floppy disc controller fitted, and newer machines, which have high density drives, have either the 82C710 or the 82C711 controller (these two are functionally equivalent).

Error numbers for 1772 controllers have the following meanings:

- 04 - Lost data
- 08 - Cyclic Redundancy Check (CRC) error
- 10 - Record not found
- 20 - Write fault
- 40 - Write protect

For high density disc controllers, the codes are:

- 01 - Controller hardware error
- 02 - Drive timed out
- 03 - Track 0 not found
- 10 - Seek fault
- 20 - Non-specific command error
- 21 - Data overrun
- 22 - Data CRC error
- 23 - Sector or ID not found
- 24 - Missing address mark

So how when you get a disc error 10 on your A3000, you know you've got a 'record not found' error. Handy, eh.

PINEAPPLE SOFTWARE

Special Offer!!

Free membership of the Pineapple Virus Protection Scheme is included with every computer purchased from us.

!!New Acorn Price Deals!!

A3010 Computers

A3010 Action Pack			
Includes Startwrite, Zool, Lemmings, Chuckrock, Supercool and Servour	1Mb Ram	£ 339	
	2Mb Ram	add £ 49	
A3010 Learning Curve			
Includes 2Mb Ram, Colour Monitor, and Learning Curve Software as described below		£ 637	

A3020 Computers

A3020 System			£ 675
Includes 2Mb Ram and Colour Monitor			
	MultiScan Monitor	add £ 42	
	60Mb Harddisc	add £ 150	
	4Mb Ram	add £ 99	

A4000 Computers

A4000 HD80 System			£ 850
Includes 2Mb Ram, 80Mb Harddisc and Colour Monitor			
	Multiscan Monitor	add £ 42	
	4Mb Ram	add £ 99	
	386 PC Card with 1Mb	add £ 225	
	486 PC Card with 4Mb	add £ 425	
	Learning Curve (See below)	add £ 42	
	Home Office (See below)	add £ 85	

A5000 Computers

A5000 2M HD80 System			£1275
Includes 2Mb Ram, 80Mb Harddisc and Multiscan Monitor			
	4Mb Ram	add £ 129	
	4Mb + 164Mb HD	add £ 170	
	Learning Curve (See below)	add £ 42	
	Home Office (See below)	add £ 85	

A5000 ES - Econet System			£1175
Includes 2Mb Ram, MultiScan Monitor and Econet			
A5000 NS - Network System			£1275
Includes 2Mb Ram, MultiScan Monitor and Ethernet			

Learning Curve System

The Learning Curve System can be purchased with the A3010, A4000 or A5000 range of computers. It consists of an audio instruction tape and software including:- Acorn Advance, PC emulator, Rhapsody 2, Scoredraw, Voxbox, Servour, Darryl the Dragon, Topography, Smart, The Crystal Rainforest, Naughty Stories and Arcventure.

Home Office System

The Home Office System can be purchased with the A4000 or A5000. It consists of an audio instruction tape and software including:- EasiWriter, Datapower, Pipedream 4, Prophet, Almanac and the PC Emulator.

A4 Portable Computer

A4 2M FD System	Includes 2Mb Ram	£1399
A4 4M HD 60 System	Includes 4Mb Ram and 60Mb HD	£1699

Pocket Book Computer

Acorn Pocket Book	£212
-------------------	------

Acorn JP150 Bubblejet Printer

Available with all the above computers	£ 212
--	-------

Other Acorn Hardware

We can supply all Acorn Hardware and Software products. Please telephone for latest prices.

!KILLER

Removes ALL known VIRUSES

Don't take chances with your valuable software. Use the program that Acorn themselves use to check for viruses.

!Killer, together with VProtect will detect and remove all of the currently known 46 families of virus (69 viruses in total). Because new viruses are being discovered all the time our virus protection scheme will provide you with 3-4 updates of the software each year. We can also offer immediate advice by phone.



Aprilfool	Archie	Arcuebus	BBCeconet	Bigfoot	Boohoo
Breakfast	CeBit	Code	Ebenezer	EMod	EX_port
Extend	ExtendV2	FCodex	Funky	Garfield_I	Garfield_W
Handler	Icon	Image	Increment	IRQFix	Link
Mode87	Module	MyMod	NetManager	NetStatus	NewDesk
Parasite	Penicillin	Poltergeist	Runopt	Sprite	SpriteUtils
Taskmanager	T2	Terminator	Thanatos	TrapHandler	Valid
VanDamme	Vigay	Whoops	Wimpman		

Don't wait until you discover you have a virus!
One years subscription costs just £24.00 + vat

Low cost school and county licences available

Pineapple Colour Video Digitiser

Full colour video digitising is made easy with our very popular digitiser. The software features are still second to none and the hardware will now work with even the A3000/4000 series of computers using our MEA/2 adapter board.

Apart from all the normal features you expect from a digitiser, the Pineapple Digitiser will grab a sequence of video frames and replay them - even while still watching the incoming video!

The standard digitiser occupies a double width expansion slot, but the boxed version which is essential for A3000/4000 computers can also be used with A3000/4000 series computers where it will only occupy one expansion slot.

A300/400/500	£199.00 + vat
A3000 boxed	£235.00 + vat
A3010/3020/4000 boxed inc. MEA/2	£260.00 + vat

Internal / External Expansion Adapter

This adapter fits the A3010, A3020 & A4000 computers, providing a 64 pin expansion socket similar to the A3000. In the case of the A3000 two expansion slots can be obtained. This enables external devices such as our video digitiser to work with A3010, A3020 and A4000 computers.

MEA /2	£28.00 + vat
--------	--------------

Pineapple PAL Coder

The Pineapple PAL Coder is a stand alone unit which provides a coded signal which can be recorded onto VHS or fed to any monitor or TV set with a coded input. The unit is inserted in the lead to the RGB monitor and provides an RGB output for the monitor together with a PAL coded output on a BNC socket. A second version also provides an output in S-VHS format as well as composite. Note that only non-multisync monitors may be fed with the RGB signal.

Standard Version	£69.00 + vat	S-VHS	£79.00 + vat
------------------	--------------	-------	--------------

Terms:- Please add 17.5% vat.
Carriage FREE to mainland UK.
Phone for quote outside UK.
Official orders, cheques, and all major credit cards accepted.
Money back guarantee on all products

Pineapple Software
39, Brownlea Gardens
Seven Kings
Ilford, Essex
IG3 9NL

Telephone Hot Line service on all products
Tel 081 599 1476 Fax 081 598 2343

Acorn Authorised Dealer

Back to basics

What's a control statement? What's a boolean expression?

Mark Moxon answers these and many more

Open up a new packet of digestives and crack open a new coffee jar, we're about to start the most interesting part of our journey into Basic programming yet. Yes, it's time to investigate *control statements*.

Take control

So, what's a control statement? Well, simply put it is a statement which changes the flow of program execution. Until now, we've only seen programs which are executed one line at a time, in sequence, starting with the first line and finishing with the last line. Control statements change this situation and enable you to alter which lines are executed, and in which order. Complicated though this sounds, control statements are pretty easy to follow.

The first concept to get to grips with is that of *boolean expressions*. Don't worry

about the rather surreal name: a boolean expression is just an expression which can be evaluated to one of two values: TRUE or FALSE. To give you an example, the expression '4>6' would evaluate to FALSE, as 4 is not bigger than 6, and '(2*var1)<>var2' would be TRUE if twice the value of var1 was not equal to that value of var2.

The actual values of the boolean variables TRUE and FALSE are -1 and 0, so if you wrote a program line PRINT TRUE it would print -1; this means that we can store boolean values in variables of type real or integer, so these two statements are equally valid:

```
condition=TRUE
condition%=FALSE
```

The first of these statements is exactly the same as:
condition=-1
and the second is the identical to this statement:
condition%=0

Listing 1

```
REM >Listing1
:
ON ERROR REPORT:PRINT " at line
";ERL/10:END
MODE 0
:
var1=1.23
var2=2.34
IF 1<2 THEN PRINT "1<2: TRUE" ELSE
PRINT "1<2: TRUE"
IF var1<>var2 THEN PRINT "var1<>
var2: TRUE" ELSE PRINT "var1<>va
r2: FALSE"
IF (2*var1)<var2 THEN PRINT "2*v
ar1<var2: TRUE" ELSE PRINT "2*va
r1<var2: FALSE"
END
```

The words TRUE and FALSE are just a convenient shorthand to make the program more readable.

The table shows the collection of numerical and string operators which can be included in boolean expressions so for example, the expression var1%<=var2% will evaluate to TRUE if the value of var1% is less than or equal to the value of var2%.

If only...

The first, and possibly the most important control statement is the IF-THEN structure, which forms the fundamental building block for decision making in programs. You can

Conditional operators

OPERATOR

A=B

A<B

A>B

A<=B

A>=B

A<>B

A\$=B\$

A\$<>B\$

NOT A

A AND B

A OR B

A EOR B

TRUE WHEN...

A is equal to B

A is less than B

A is greater than B

A is less than or equal to B

A is greater than or equal to B

A is not equal to B

A\$ and B\$ are the same

A\$ and B\$ are different

A is FALSE

Both A and B are TRUE

Either A or B is TRUE (or both)

Either A or B is TRUE (but not both)

put together an IF-THEN structure in a number of ways, but the simplest is like this:

IF cond THEN statements

The condition cond is a boolean expression which evaluates to TRUE or FALSE: if it is TRUE, then the statements are executed, otherwise the program moves on to the next line. Notice that if you want to include more than one statement in statements then you should separate them by commas, though a much more readable method is described in the next section.

An extension of the IF-THEN structure is the inclusion of an ELSE part. The whole structure then looks like:

```
IF cond THEN state1 ELSE
state2
```

Here the state1 statements are executed if the condition is TRUE, and the state2 statements are executed if it is FALSE.

To give you an idea of how all this works, have a look at Listing One. It contains a collection of IF-THEN and IF-THEN-ELSE statements. It's all pretty logical (if you'll excuse the rather sad pun), and if you read each structure through, it'll make sense. Don't forget the programs are on the disc, but it's a good idea to type them in yourself, as typing and debugging listings is the best way to learn.

Block structures

The most useful version of the IF construct is the so-called block structured IF-THEN-ELSE-ENDIF structure. This structure spans a number of program lines and enables you to create whole program segments that may or may not be executed, depending on a certain condition. The way it is laid out is as follows:

```
IF condition THEN
...<first statements>...
ELSE
...<second statements>...
ENDIF
```

The first set of statements is

Listing 2

```
REM >Listing2
:
ON ERROR REPORT:PRINT " at line ";ERL/10:END
MODE 0
:
INPUT "Please enter your name: " name$
IF name$="Vivian" THEN
INPUT "Are you male or female? (M/F)" sex$
IF sex$="M" THEN PRINT "Your hair is brown" ELSE PRINT
"Your hair is blonde"
ELSE
IF name$="Kim" THEN
INPUT "Are you male or female? (M/F)" sex$
IF sex$="M" THEN PRINT "Your hair is green" ELSE PRIN
T "Your hair is ginger"
ELSE
PRINT "That name is not known"
ENDIF
ENDIF
END
```

executed if the condition evaluates to TRUE, and the second set if it evaluates to FALSE. The big advantage of this structure is that the two sets of statements can include more IF-THEN structures without confusing the issue.

Let's take an example. Say we wanted to write a program which would ask you what your name was, and whether you were male or female, and would then tell you what your hair colour was. OK, this is only applicable if the computer already knows about the hair colour, sexes and names of certain people, but let's assume the information in the table below holds true: apologies for the green hair, but you try thinking of a fourth colour.

Now have a look at Listing Two above. This does exactly what we want, and the use of indenting spaces helps to show how the program flows. Remember, only press RETURN when you see the ¶ character: there are two lines in this listing which have had to be split to fit in the box.

Here's a quick breakdown of the program flow, which should be pretty obvious once

you've typed it in and it's sitting in an *Edit* window.

LINE 6: Get the name into name\$.

LINE 7: If the user has entered Vivian then...

LINE 8: Enter the sex into sex\$.

LINE 9: If the sex is male, then the user is male Vivian, and has brown hair, so print that; otherwise the user is female Vivian, and has blonde hair, so print that.

LINE 10: If the program gets here, then the name isn't Vivian...

LINE 11: So check to see if it is Kim. If it is...

LINE 12: Enter the sex into sex\$.

LINE 13: If the sex is male, then the user is male Kim, and has green hair, so print that; otherwise the user is female Kim, and has ginger hair, so print that.

LINE 14: If the program gets here, then the name entered is neither Vivian nor Kim...

LINE 15: So print an error message

LINE 16: Indicates end of IF construct that starts in line 11.

LINE 17: Indicates the end of the IF construct that starts in line 7.

LINE 18: End of program.

And the rest

There are plenty of other control structures to investigate, like WHILE-ENDWHILE and CASE-ENDCASE, but that's a treat for next time. Can't wait...

Hair colour

NAME	SEX	HAIR COLOUR
Kim	Male	Green
Kim	Female	Ginger
Vivian	Male	Brown
Vivian	Female	Blonde

ARM3 upgrade with floating point accelerator (FPA) option. £139.

ARM3+FPA fitted and tested £199.

The ARM3 upgrade increases the speed of your computer by a factor of 3 (typically), and sometimes even more. Acorn's new floating point chip, the FPA10, speeds up maths operations previously emulated by software.

A 68-pin socket is provided on the ARM3 board, and the FPA chip can simply be plugged in at any time.

The upgrade uses a high quality 4-layer circuit board. It may be fitted to the A305, A310, A440, 400/1 series and the A3000. Installation is straightforward for the 300 and 400 series computers. A 3-day fitting service is available if required. Please note that the A300 series and old A440 require the MEMC1a upgrade.

25MHz ARM3 - £139

MEMC1a - £25 Floating point chip - £95

ARM3 with FPA fitted - £199

35MHz ARM3 - only £139

We still have limited stocks of these ultra-fast ARM3 upgrades. Some of the most popular Archimedes applications (such as Impression, Artworks and even BASIC V) do not gain anything from the FPA10. So, for those using Impression or Artworks extensively, the 35MHz upgrade is the only logical choice. Please write or phone for full details.

Our usual money-back guarantee applies to all ARM3 upgrades.

A3000 memory - 4Mb £99

An easy to fit and reliable RAM upgrade. Gold plated connectors ensure long term reliability. This upgrade uses a four-layer circuit board as recommended by Acorn. No soldering needed. 2Mb RAM board (upgradable to 4Mb) - £48
4Mb RAM - £99
Bare board (without RAM chips) - £25
2Mb to 4Mb upgrade - £63

A3010/A3020/A4000 RAM

These machines may all be upgraded by easy to fit, plug-in components. No soldering is required.

A3020/A4000 extra 2Mb - £58

A3010 extra 1Mb (2Mb total) - £32

A3010 upgrade to 4Mb - £107

All products fully guaranteed. Many products also carry our 14-day money-back guarantee too. Please phone for details.

This month's specials

2Mb RAM for A310	£75
2Mb RAM for A5000	£69
Impression II	£115
Artworks	£120
245Mb SCSI disc inc. card	£370

RISC OS 3

Acorn's new operating system for their range of RISC computers. The old version of RISC OS (2.00) is just 512K long, whereas OS 3 contains 2Mb of code. Many applications which were previously supplied on disc are now contained in the OS ROMs. These include improved versions of Draw, Paint and Edit. Because they are available on ROM they are always instantly accessible, and also occupy less RAM space.

Other features include extra "background" operations. For example, discs can now be formatted or files copied while the machine is used for other purposes.

RISC OS 3 may be used on the A305, A310, A440, 400/1 series, A3000, A540 etc.

RISC OS 3 £41.70

A305, A310 and A440 owners please note. You will need to install the RISC OS Carrier Board in order to use RISC OS 3. The RCB may be used with any version of RISC OS. This carrier board is compatible with memory boards, ARM3 upgrades and does not in any way obstruct expansion cards ("modules").

RISC OS Carrier Board £18

A5000 systems & memory

A5000 with RISC OS 3, 80Mb hard disc, multisync monitor and ARM3. - £1399.

A5000 learning curve. - £1445.

Free 4Mb RAM upgrade included in the price.

2Mb memory board (4Mb total) - £69

A compact board measuring just 104mm by 49mm, this design fits vertically in your machine. No soldering required. Unlike larger boards, there is no need to remove the disc drive. Four-layer design as specified by Acorn. A bare board (ie without the RAM chips fitted) is also available.

Hard disc upgrades

A range of fast SCSI or IDE internal hard discs with a year's warranty, in sizes from 40Mb upwards. Complete systems supplied with all metalwork and cables. 400/1 machines merely require the drive and controller card. 300 series require a backplane.

40Mb SCSI - £180 85Mb SCSI - £210

120Mb SCSI - £250 210Mb SCSI - £320

Fast 16 bit SCSI card - £100

50Mb IDE - £160 120Mb IDE - £250

IDE controller card - £75

(add £75 for external version of SCSI discs)

Various

Aleph One 386 1Mb PC Card - £390 (4Mb £475)

Aleph One 486 1Mb PC Card - £490 (4Mb £575)

Free price list available upon request.
Prices exclude VAT.

A300 series upgrade column. 2Mb £89, 4Mb £128

Memory expansion

Extra memory is without doubt the most worthwhile addition to any A300 series machine. Some programs won't even run with only 1Mb, and 2Mb is a bare minimum. Certain applications, desktop publishing for example, benefit from a 4Mb system.

1Mb to 2Mb - £75 1Mb to 4Mb - £128

Upgrade from 2Mb to 4Mb (self fit) £65

Compatibility. The memory is detected and used by the machine automatically, so there are no special commands needed. Works with both RISC OS 2 and RISC OS 3.

Fully compatible with ARM3 upgrades, backplanes, hard discs etc. This upgrade is supplied on just one, compact board measuring only 195mm by 46mm. Four-layer circuitry reduces electrical noise for trouble-free operation. The 2Mb upgrade may be upgraded to 4Mb later by the user, without any soldering. A copy of the fitting instructions is available free of charge.

A complete fitting service is available for our RAM boards covering courier collection, installation and testing, MEMC1a, return delivery and guarantee. This is normally a three-day service (eg, collected Monday, returned Wednesday). We have been upgrading 300 series computers for nearly four years, and during that time a reliability record second-to-none has been established.

Is there any other 300 series RAM upgrade which has been available for as long as this one, and which has the same reputation for quality and reliability? No.

Still not sure? Compare it with the competition before making up your mind. Use our 14-day money-back guarantee to check it out for yourself.

RISC OS Carrier Board £18

This is an easy to install adaptor board for the larger RISC OS 3 ROMs. A set of links on the board allows it to be used with RISC OS 2 and easily adapted for RISC OS 3 later. Suitable for use with the A305, A310 and A440. The adaptor has been fully tested with RISC OS version 2 and version 3. It is fully compatible with other hardware upgrades such as the RAM board described above, ARM3's, backplanes, VIDE enhancers and expansion cards.

4-slot backplane with fan £52

Combination deals

4Mb with MEMC1a, self-fit £152

Collection of your computer, installation of 4Mb of RAM, MEMC1a, and RISC OS Carrier Board, testing, full guarantee, and return delivery £189

As above, but with 2Mb of RAM £125

(Add £40 to have RISC OS 3 fitted at the same time.)

RAM for 410 & 420

Upgrade from 1Mb to 2Mb - £33

Upgrade from 2Mb to 4Mb - £65

Upgrade from 1Mb to 4Mb - £98

Supplied with full instructions.



IFEL Ltd

Educational and quantity discount available.

34 Culver Road, Saltash, Cornwall PL12 4DR. Tel (0752) 847286. Fax (0752) 840029

One Stop Storage

Hard Drives

A3000/10/20 (Internal)

30Mb	15ms	IDE	189
60Mb	15ms	IDE	219
85Mb	15ms	IDE	229
120Mb	15ms	IDE	269
170Mb	15ms	IDE	339
210Mb	15ms	IDE	379

Other Acorn Machines

Conner (1 Year G'tee)

120Mb	19ms	IDE	159
170Mb	19ms	IDE	179
250Mb	15ms	IDE	219
340Mb	15ms	IDE	299
170Mb	16ms	SCSI	189
540Mb	12ms	SCSI	549

Quantum (2/5 Year G'tee)

127Mb	15ms	IDE	169
170Mb	15ms	IDE	189
240Mb	15ms	IDE	239
127Mb	15ms	SCSI	179
170Mb	15ms	SCSI	199
240Mb	15ms	SCSI	269

525Mb 10ms SCSI 569

1.0 Gb 10ms SCSI 799

W/D Caviar (2/3 Year G'tee)

170Mb	12ms	IDE	179
212Mb	12ms	IDE	199
256Mb	12ms	IDE	229
340Mb	12ms	IDE	299
425Mb	12ms	IDE	395

Fujitsu (5 Year G'tee)

330Mb	12ms	SCSI	399
520Mb	12ms	SCSI	559
1.0 Gb	10ms	SCSI	799
2.0 Gb	12ms	SCSI	1489

Optical Drives

These drives have a FAST 30ms access time and, are supplied with cables and a 128Mb Optical Disk (Requires SCSI port)

128Mb Int. (A5000)	599
128Mb Ext.	689
Optional double shutter	18
Additional 128Mb Disk	35

Tape Backup Drives

Superb "Disaster Recovery" and Data archiving systems. Externally housed, complete with Software, Cables, Tape. (Requires SCSI port)

250Mb complete	499
500Mb complete	629
1.0 Gb complete	795
Additional Tape 20/25/30	
SAS Backup Software	75

CD-ROM Drives

Morley "Revolution" 289
A complete CD solution, includes interface & cables.

Toshiba (Fastest CD) 379
(Requires SCSI port)

I/O Cards

Morley 16bit SCSI	139
Morley cached SCSI	179
VT A30xx SCSI	99
ICS A30xx IDE	89
ICS Axx0 IDE	65

Miscellaneous

Drive enclosure	89
IDE cable, 2 x Drives	10
SCSI cable, 2 x Drives	10
SCSI cable, external	15
SCSI terminator	15
Power splitter	2
HD Precision Disks (10)	9

Government Education
Overseas
Orders Welcome

TECHNOLOGY
Matrix

Telephone
061-320 3087
Fax: 061- 320 3210

All prices exclude
VAT & carriage. Prices
& specifications may
change without notice
E. & O.E

2, FIELD MEWS, DENTON, MANCHESTER, M34 2DA

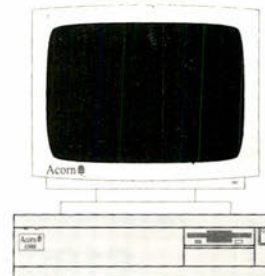
LOWEST ADVERTISED PRICES



A5000

Multiscan System
ONLY £1199

(special promotional price - limited stocks)



A3010 Action Pack ONLY £319

A4000 Colour System ONLY £785

A4 HD Portable ONLY £1550

"PHONE FOR OTHER PRICES"

MAIL ORDER ONLY

Education Orders Welcome.

VAT extra on all prices.

Access and Visa Welcome.

Carriage £8

Next day supplement £5

MICRO DISCOUNT phone 031-668 4700
55 Clerk Street, Edinburgh, EH8 9JQ.

Important

Announcement!

We're delighted to announce that we have been appointed as Acorn Dealers. We are now supplying complete Acorn systems including the new A3010 Action Pack, 33MHz A5000 and the latest Home Office and Learning Curve packs.

Using Access, Visa, Mastercard or Delta (Delta over £50 only) you can phone your orders on (0273) 208074 or fax them on (0273) 738258. Cheques by post are also very welcome (processing credit cards cost us a small fortune)! Out of hours or when we're busy use our answerphone to leave your order or message. Check our prices.....

Computers

A3010 Action Pack.....	385.00
(Includes Zool, Startwrite & lots of demos)	
A3010 Learning Curve.....	740.00
(1Mb, Learning Curve pack & Acorn monitor)	
A3020 System.....	785.00
(Includes Acorn monitor)	
A4000 System.....	1084.00
(2Mb, 80Mb HD, & Acorn standard monitor)	
A4000 Learning Curve.....	1035.00
(2Mb, 80Mb HD, Learning Curve & std. monitor)	
A4000 Home Office.....	1084.00
(2Mb, 80Mb HD, Home Office & std. monitor)	
A5000 HD80 System.....	835.00
(2Mb, 80Mb HD & Acorn multiscan hi-res monitor)	
A5000 Learning Curve.....	1530.00
(2Mb, 80Mb HD, Learning Curve & multiscan mon.)	
A5000 Home Office.....	1575.00
(2Mb, 80Mb HD, Home Office & multiscan monitor)	
A5000 HD160 Learning Curve.....	1730.00
(4Mb, 160Mb HD, Learning Curve & multiscan mon)	
A5000 HD160 Home Office.....	1780.00
(4Mb, 160Mb HD, Home Office & multiscan mon.)	
Multiscan monitor with A3020/A4000.....	add 50.00

All prices include VAT, Postage and Packing. PO Cash on Delivery: add £6.00 for orders up to £500. E&OE

Acorn systems are now even better value at the new, reduced prices with improved Learning Curve and Home Office packs. Learning Curve now includes Advance and PC Soft. Home Office now includes EasiWriter2, Pipedream 4, Datapower, PC Soft and some useful demos.

With our great prices and service SENLAC has always been an excellent choice but now we offer even greater value. Every purchaser of a computer system also gets; absolutely free; a mouse mat, a box of 10 high quality TDK high density discs and a disc storage box. You also get the opportunity to purchase from a popular selection of software at these very special 'package' prices

Most items in our range can be discounted even more than usual when bought at the same time as an Acorn system. Here are a few examples.....

Artworks.....	137.00
Canon BJC800.....	1530.00
With CC Turbo Driver & Lead	
Dungeon.....	25.95
Impression 2.....	137.00
Lemmings.....	19.50
Resultz.....	123.00
ScanLight 256.....	210.00
Squirrel.....	135.00

Please note: the special 'package' prices in this box ONLY apply when purchased together with an Acorn computer.

SENLAC

Computing
Limited

(AU1193)

PO Box 304

BRIGHTON BN2 2TT

Tel (0273) 208074

Fax (0273) 738258

*** A selection from the rest of our competitively priced range ***

Art/Graphics	Music	Spreadsheets	Krisalis Collection.....
Artworks.....	Notate.....	Eureka!.....	24.95
Revelation 2.....	Rhapsody 2.....	Resultz.....	Lemmings.....
Communications	Score Draw.....		21.75
ArcFax.....	MIDI/Sampler (Econet).....	Aldebaran.....	Quark.....
ArcTerm 7.....	Peripherals	Battle Chess.....	24.00
Databases	Vision Colour Dig. (Int).....	Black Angel.....	Lotus Turbo Ch. 2.....
Archivist Pro.....	HiVision * (Int).....	Champions.....	21.75
Junior Database (Iota).....	ScanLight 256.....	Dungeon.....	Saloon Cars Deluxe.....
DTP/WP	Printers	EGO: Repton 4.....	29.00
Impression 2.....	Canon BJC800 (+cc drv).....	Guile.....	Sim City.....
Impression Junior.....	LaserDirect HiRes 4.....	Hero Quest.....	28.00
			Spheres of Chaos.....
			21.25
			Stunt Racer 2000.....
			29.25
			Technodream.....
			21.25
			Virtual Golf.....
			29.00
			X-Fire.....
			20.75
			Zool.....
			23.00

*INFO

Dave Lawrence and Dave Acton
present their monthly mix of
programs, for all Acorn users

BLEND

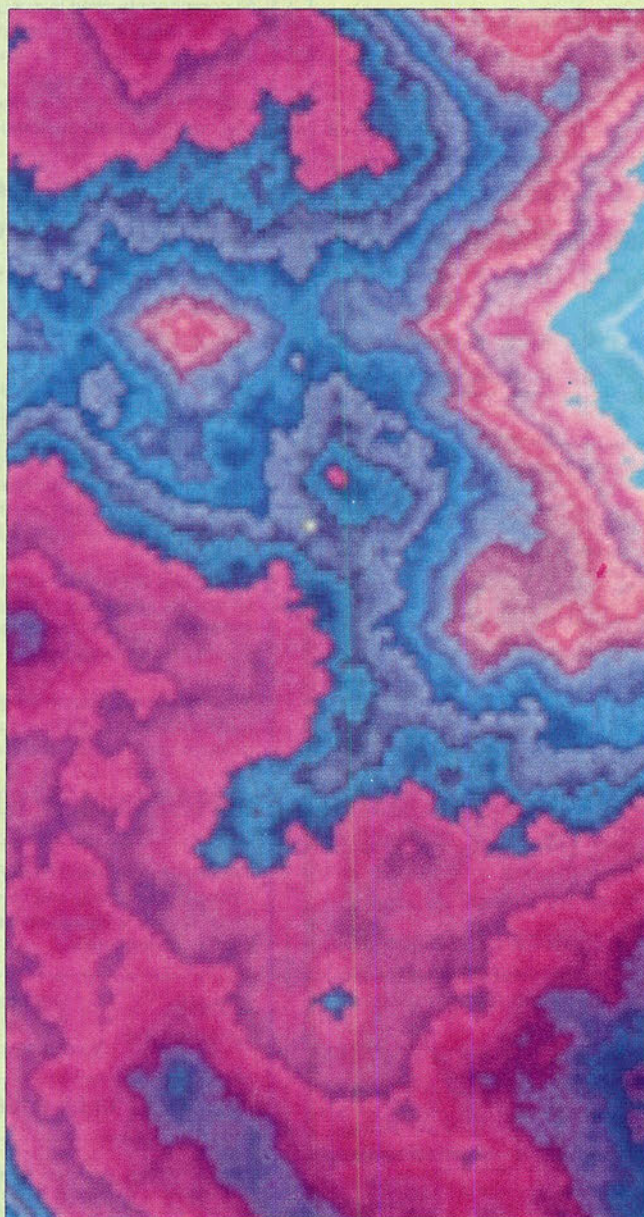
Fractals can come in many shapes and sizes and this month we have a rather pretty fractal number which was devised and sent to us by Chris Rijk of Cheltenham.

As with many such demos, a picture is produced using a fairly simple formula and you are presented with a zoom box. You use the middle and right mouse buttons to alter the size of the box; then press the left button to generate the next image. Even if you don't understand the technicalities, it is still possible to while away the hours in pursuit of the perfect fractal. Chris describes his creation thus:

'Blend works by finding the maximum variation possible between the values at two (or more) points.

'It then plots, in the middle, random values from that range so that values differ by a maximum of the separating distance in pixels. It carries on, decreasing the separating distance in factors of two, until it reaches one pixel.

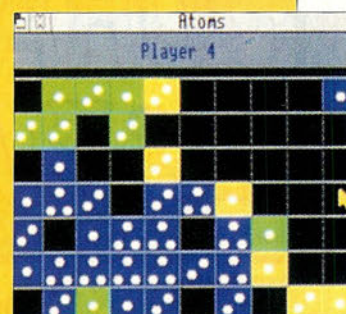
'Once a blend is complete you can zoom up the current screen. I originally designed it so different-sized blend areas could be used, but the process is so fast you might as well do the largest possible.'



DESKTOP ATOMS

Way back, we featured a tactical game called *Atoms* by Adrian St John. LC Howe added a computer-play algorithm and now, a fully multi-tasking version – *Atoms* – has been written by Niall Douglas.

Players take turns placing an atom on the board. You put an atom of your colour in an empty square or add it to a square containing atoms of your colour. If a square reaches its critical number of



atoms (number of adjacent squares: four for the middle, three the sides, two the corners) they spill out causing a chain reaction.

When an atom bursts into another square any atoms there have their colour changed to the intruder's. The aim is to wipe out the opponents' atoms. This is Niall's first application and he's done a great job.

Gnome Computers Limited

25A Huntingdon Street, St. Neots, Cambs, PE19 1BG
Tel./Fax: 0480 406164 E-Mail: support@gnome.co.uk

X Window System R11.4

This software package, developed in association with Acorn Computers, converts a RISC OS based Archimedes into an X Terminal. The software will allow communication with X clients over Ethernet or Econet. Graphic support includes both the state machine G8 and Computer Concepts ColourCard.

X Software	£199
Complete Colour X Terminals from	£1150

Archimedes upgrades

External SCSI 200MB H/D + Acorn SCSI Card	£780
External SCSI 1.2GB H/D + Acorn SCSI Card	£1340
External 150MByte SCSI Tape Drive	£650
External 8GByte SCSI DAT Tape Drive	£1450

RISC OS SLIP & BIND

This package gives SLIP & DNS support for Acorn Computers TCP IP suite version 2.

Single user price	£30
-------------------	-----

UNIX & Network Specialists



JURASSIC

Clip Art PACK

for Acorn & IBM computers

£29.95

Art School

JURASSIC

Clip-Art Disc Set

to use with ArtSchool includes clips, scenes, backgrounds etc.

£9.95 inc. Postage

SPORT

Graphics Library Pack

Draw format Clip-Art for all Acorn and IBM computers

£29.95 inc. Postage

For details
send 2 x 24p
stamps

MICRO STUDIO 22 Churchgate Street
SOHAM, Cambridgeshire. CB7 5DS
Telephone 0353 720433

For 800k
Demo disc
send £1 coin

SIMTEC Upgrades

In stock now....

A3010 memory	1 - 2 Mb	32.00
	1 - 4 Mb	106.00
	4 Mb Turbo	130.00
A5000 memory	2 - 4 Mb	74.00
A3000 memory	1 - 2 Mb non-expandable	43.00
	1 - 2 Mb expandable	47.00
	1 - 4 Mb	99.00
	2 - 4 Mb chip upgrade	60.00
A3000 Serial upgrade kit		15.00
305/310 memory	4 Mb	127.00
Risc-OS3 carrier board		17.00
MEMC1a upgrade kit		24.00
An efficient three-day fitting service is available, which includes: courier collection of your machine, fitting of the above three items, testing and return for a special price of		
		185.00
A400/1 memory	1 Mb packs	36.00
PLCC extractor tool for MEMC and ARM3		8.00

All components used in our upgrades are brand new and not previously used. Salvaged chips are unlikely to have always been handled under anti-static conditions. As a result it is impossible to guarantee the long-term reliability of these parts. It would be unfair to sell goods containing such inferior parts and we therefore regret we are unable to take items in part exchange from customers wishing to upgrade.

ARM3 + FPA = £199

We are still offering a special package price for our ARM3 upgrade board complete with fitted FPA chip. The upgrade plugs easily into a 300, 440, A400/1 or R140 machine, but 305/310 and old style 440s will also need upgrading with a MEMC1a for an ARM3 to work correctly. The upgrade's ultra-low profile construction allows it to be fitted to an A3000, although in this case a motherboard modification is required which can be carried out by ourselves or another Surface Mount Service Centre.

Integration of the ARM3 and FPA socket onto a single 4-layer PCB eliminates any possible interconnection problems that could occur with a separate plug on FPA adaptor, as well as avoiding the cost of purchasing an extra board.

We also offer the same ARM3 upgrade but with empty socket. This retains the option of fitting the FPA at a later date, when the chip can be plugged into the vacant socket if desired.

ARM3 with FPA socket - £129

We are an authorised SURFACE-MOUNT SERVICE CENTRE fully capable of servicing and repairing Acorn computers to component level. We also offer a fitting service for any of the above upgrades - please contact us for details.

Quality Assurance

Our products are designed and manufactured to the highest standards by SIMTEC in the UK. Everything we sell is rigorously tested and fully guaranteed.

17½% VAT to be added to orders. Carriage free in UK.

SIMTEC
ELECTRONICS

Avondale Drive, Tarleton,
Preston, Lancs PR4 6AX
Tel: (0772) 812863

FRAMES

Regular readers will probably remember Tim Jones' excellent three-dimensional *Dots* program from April this year. *Frames* is an equally good offering.

The *Frames* program comes in two stages; you are let loose on an empty screen, to design a 'structure' (or frame) from points and links. Clicking Select will add a red dot to the screen; holding down Select will then create a link; releasing the button creates a further dot.

Alternatively, moving close to an existing dot will highlight it with a yellow circle and releasing the button will join the link to that dot. Further links can be added to an existing dot in a similar fashion by commencing a drag from it.

The Adjust button does precisely that; it allows you to adjust the position of existing dots. Simply Adjust-drag the offending pixels.

Once you are happy with your framework (just try a few simple shapes to start with) press Space and gravity will be switched on. The framework will then obey the laws of gravity, elasticity and bounciness. So it will fall, distort and bounce off the sides of the screen. By using the mouse, you can grab hold of a point in the frame and drag it around, spin it about and generally throw it all over the place.

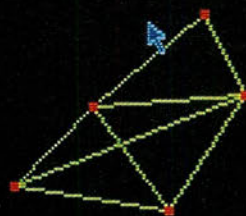
There are various other control keys that vary the program; D toggles the plotting of the actual points in the framework; P pauses the animation until another key is pressed; S resets to the initial state

Gravity
2.00

Tautness
0.80

Bounce
1.00

Drag
0.99



(useful if you lose the frame off the screen); T switches on Adjust mode and Space takes you back to the editor.

In Adjust mode, the gravity, tautness, bounce and drag of the *Frames* 'universe' can be altered. Select the parameter with the left and right cursor keys and adjust the value with the up and down cursor keys. A further press of T will switch off Adjust.

One other feature available to you is anchor points. These are created with Menu instead of Select. They can be linked and moved in the same way as ordinary dots, but they are plotted in green and are not affected by gravity in the simulation stage. One final key is R, this clears all dots and links in the editor.

SHATTER

Firstly, apologies to our favourite Danish regular contributor, Jan Vibe, for suggesting last month that he is in fact Dutch!

We get a lot of submissions from both countries (and largely from people called Jan it seems) so we tend to get a bit mixed up between our European countries sometimes.

Anyway, apologies to Jan for changing his country of residence.

Jan has come up trumps again this month, with another program for us. This month's *Vibism* is a very convincing simulation of a piece of glass (or something suitably brittle) being smashed into pieces.

Jan says in his letter: 'maybe someone can use this for something.' Well, maybe someone can; if you come up with any useful application for this we'd like to hear from you – in the meantime just enjoy Jan's demo.

There are two listings here in fact – *Shatter* and *Shatter2*. Both of these listings work in the same way, except that the

latter stores the stages of fragmentation and then plays them back at the end.

Jan's program is quite a cunning little number and the way it works (more or less) is as following.

Firstly, a polygon with a random number of sides is created. This shape is then shattered into 50 pieces.

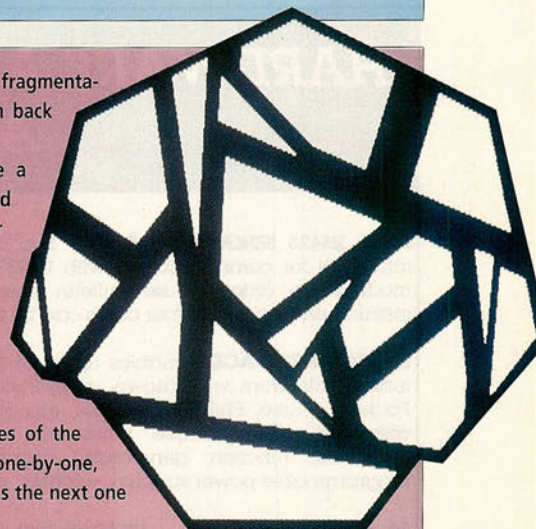
Then, the current pieces of the original are examined one-by-one, and the largest is picked as the next one to break into two.

The area of a polygon is found by averaging all the x and y co-ordinates of the vertices to find a mid-point, and then adding up the areas of all the triangles formed between the mid-point and the sides.

Having found the biggest chunk, the longest side of that chunk is selected for breaking. Then, another side is chosen randomly and the polygon is severed between the two.

The split occurs either a third or two-thirds the way along the side. Having split the polygon, the co-ordinates of the two parts are entered into the list and the shattering process continues. The end result is very convincing.

A real-time machine code version shouldn't be too difficult and would look very impressive, we think – any offers?



Prophet

ACCOUNTS

'Currently the leader of the pack because of its general ease of use, comprehensive nature and high RiscOS factor. A well thought out and well supported program. Recommended' - Arc World, July 1993.

All the other Acorn magazines have also given Prophet top class reviews, but the people who really know how good Prophet is are its users (who are not without a sense of humour!).

The following extract is from a recent letter: 'Just returning Prophet V1.29 for upgrading in due course. Its getting better all the time...if you could get it to go out and take photographs for me while I go windsurfing I think that should

probably do it!" - E Williams, Photographer.

Compared to other accounting programs Prophet is a breath of fresh air.

You can use as much or as little of Prophet's extensive features as you need - from simply entering your income and payments - to stock control and invoicing, even calculating your balance sheet and tax liability.

All your data is kept in a single file for the whole year which means that you can edit all of your entries and produce reports on any aspect of your accounts for any period any time you like.

You can also run as many different sets of accounts on it as you wish and if you're VAT registered Prophet also caters for the Cash Accounting scheme and many of the retail VAT schemes - it is also accepted by HM Customs & Excise for VAT purposes.

Other features include Automatic Standing Orders, Multiple Bank/Cash accounts, Stock Control, Invoicing, Statements, Purchase Orders, Credit & Delivery Notes (all of which are user-definable in Prophet's own DTP windows), Labels, Mail Merging and exporting of data to all the other popular RiscOS packages.

Prophet is fully multi tasking and compliant with all versions of RiscOS. It will run on any Acorn 32 bit computer with a minimum of 2mb of memory.

Prophet costs £199.75 inc VAT. An entry level version is available for £10. This includes the save option - any files created will load directly into the full version and the cost is refundable on full purchase so your work wont be wasted.

See Prophet on Stand 41 Acorn World '93, Wembley 29/31 October

The entry level version is now included in Acorn's new Home Office pack.

And now...!Shares

A fully multi tasking stocks & shares program with everything you would expect except the price..just £39.95 inclusive.

!Shares features easy entering and editing of your data, multiple portfolios, graphs and much more. Please send for the free demonstration disc or order direct from Apricote Studios.



The current version of Prophet has a myriad of extra features based on user feedback and this combined with our policy of free upgrades ensure that Prophet will always remain the number one choice for small business accounts software on the Archimedes. There are over 600 Prophet users which include Acorn dealers such as: 4Mation, EFF, Stallion, Spacotech, Davyn, Arm-Tech, Topologika.....



Apricote Studios, 2 Purls Bridge Farm, Manea, Cambs, PE15 0ND. Tel: 0354 680432



HARDWARE AND SOFTWARE EXPANSION FOR ACORN COMPUTERS

DUAL RS423 SERIAL INTERFACE - two additional RS423 serial interfaces for communicating with RS423 or RS232 devices eg modems (in order to use bulletin boards), printers, plotters, instruments, etc. Up to four cards can be fitted in a computer.

IEEE488 INTERFACE - enables up to 14 test and measurement instruments, from well known manufacturers such as Hewlett-Packard, Fluke, Philips, Tektronix, etc. to be connected to the computer. For example, voltmeters, oscilloscopes, spectrum analysers, function generators, counters, logic analysers, programmable power supplies, plotters, printers, etc.

16 BIT PARALLEL I/O - provides two separate 16 bit input/output ports. Other facilities include four 16 bit counter/timers, two 8 bit shift registers and eight interrupt inputs. Applications range from measurement and control to high speed data input and output.

12 BIT ADC - provides eight single ended inputs each with an input voltage range of -5 to +5 Volts. Up to 166,000 samples per second can be taken.

STEBus INTERFACE - overcomes the limitation of a maximum of four expansion cards in a computer by enabling the use of industry standard STEBus boards in an external input/output sub-system for measurement and control applications.

SCSI DEVICES - internal and external hard disc drives, magneto-optical removable disc drives, tape streamers etc.

FORTRAN 77 COMPILER - completely compatible with the now discontinued Acornsoft compiler.

GINO-F 3D, GINOGRAPH, GINOSURF and HERSHEY+ - the FORTRAN subroutine graphics libraries.

Intelligent Interfaces are Brady Associates distributor for GINO-F 3D, GINOGRAPH and GINOSURF for Acorn RISC OS-based computers.

TERMULATOR - enables a computer to emulate a terminal from the VT range (VT52, VT102 or VT220) or a Tektronix 4010 graphics terminal.

Termulator a trade mark of Acorn Computers Limited is applied to this product under licence from Acorn Computers Limited.

COMPLETE SYSTEMS - configured to customer's requirements by fitting RAM upgrades, hard discs, expansion cards, etc.

ADVICE - SUPPLY - SUPPORT - Intelligent Interfaces were established in 1981 and have enjoyed a long relationship with Acorn Computers. This places them in an ideal position to advise on, supply and support systems purchased from them.

Intelligent Interfaces Ltd
P O Box 80
Eastleigh
Hants
SO5 5YX
Tel: 0703 261514 Fax: 0703 267904

**INTELLIGENT
INTERFACES**

REBOUND

Keeping with the bouncy, gravitational feel of *Frames*, our next item is Chris Bassett's *Rebound*, a surprisingly-fun game. The screen consists of a large box with a number of obstacles dotted around; you are a microdot and start at a random position up the left-hand side of the screen.

You move at a constant horizontal speed but

your vertical movement is affected by gravity. You bounce off the obstacles in the playing arena, but die if you move off the screen. The idea is to escape off the right-hand side. Your only control is Space, effectively a thrust key, which can be used to control the gravitational effect.

The longer you stay in play, the more points you score. By the way, to achieve a high score, you have to do more than follow a 'straight' path across the screen.



COMPETITION RESULTS

We had a good response to our June Life for 2 competition and are pleased to announce the winner – Mike Cumpstey of Altrincham. Special mentions go out to David Marples of Oxford for coming second and Ian Cumpstey (Mike's son) for coming third. Mike's winning entry, *cumpstey1*, is on the monthly disc.

We are giving the programming competition a rest for a while. By way of letting you down gently, we have a suggestion from Stephen Scott of Egham. He was playing with a Barcode Battler in a toyshop and wondered if the idea could be converted to the Archimedes.

We thought that instead of scanning barcodes, files or directories could be dropped on an icon, this would perform a CRC (cyclic redundancy check) to come up with an effectively-random number based on that file.

This number could be used to generate warriors, wizards, weapons and anything else beginning with W. Battle would then ensue.

POKESERIAL

Patch 1 and Patch 2

These two patches were supplied by Nick Craig-Wood. The first corrects an oversight in the old-style serial driver interrupt routine for 65C51 chips found in pre-A5000 machines.

In the original, when the serial interrupt is handled, the OS changes from IRQ mode to SVC, but forgets to disable interrupts. If the machine is busy (maybe running in the desktop under Risc OS 3) one character may be delayed so the second character arrives while the first is being processed.

Because the interrupts are not turned off, the second character overwrites the first and the first is missed entirely. The poke ensures when the OS changes from IRQ to SVC, interrupts are disabled.

To test the poke, a 66222-byte file was pipecopied from an A5000 to an A400 with ARM3 from the command line in Mode 12. The tests were

run with standard size serial buffers of 192 and 255 bytes for transmit and receive at 19200baud.

Most comms programs (*Arcterm* and *Hearsay* for instance) install a larger buffer under Risc OS 3, which improves the performance further. In the course of investigations into the serial device driver it became obvious where the baud rate table was stored for the 82C710: the device in the machines from the A5000 onwards.

With the help of the technical reference manual it was possible to decode it and provide a utility for changing the available baud rates. Unfortunately, this can't be done with the older 65C51 device.

You will notice if you run the program that the 82C710 cannot generate exactly the right frequencies for the baud rates. This is because it is driven with a clock derived from the 24Mhz system clock rather than having a separate crystal (for cost reasons). The patch finds the nearest baud rate to that asked for.

You can try using 38400baud with the poked serial device driver. However, you may not find it perfectly reliable in larger screen modes, and without an Arm3.

To apply the patches you need to RMSave the SerialDeviceDriver module to a file of your choice. Run PokeSerial and give the file name of the file you saved, when it asks. Now follow the instructions. Type in a filename for the poked module when prompted.

You need to load the poked module before you start using the serial port. You can do this by double-clicking on it or including an RMLoad in your !Boot file.

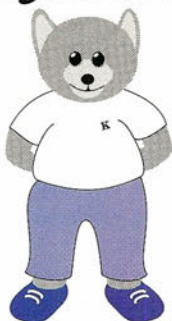
Number of characters lost over the link

	Standard	Poked
ARM2	167	5
ARM3	39	0

Educational Software

- Splosh
- Banner
- Pictogram
- DataSheet
- Word Library
- DataSweet 2
- DataSweet/PC

Tel: 0926 851147



Kudlian
Soft

Once you see our software on the screen you will understand why it is used in thousands of schools throughout the country.

For a free demo disc and product guide please send a stamped addressed envelope to:

Kudlian Soft, 8 Barrow Road, Kenilworth
Warwickshire CV8 1EH

Part Exchange

your BBC, Master 128, A3000 or Archimedes 300/400, for a new

A4000 or A5000

The table below shows examples of the balance you can expect to pay when part exchanging your old system, but please phone first to confirm

old system	BBC B	Master	A3000	A440/1
new system			Monitor	Monitor
A4000HD80	775	725	519	269
A5000HD80	1175	1125	919	669
A5000HD250	1359	1299	1099	849

New Learning Curve and Home Office systems also available

A5000/A4000 Hard Disk Part Exchanges

from 40 to 80 Mbyte - £89.00
from 40 to 250 Mbyte - £189.00
from 80 to 250 Mbyte - £169.00

Collection and delivery service - £15.00
Software transferred free.

Second Hand

BBC	£ 50.00
Master 128	£150.00
A3000	£300.00
A420/1	£500.00
A440/1	£600.00
A440	£500.00
A310	£300.00
Colour Monitor	£100.00

Computers Ltd

123 New London Road
Chelmsford Essex CM2 0QT
tel/fax 0245 345263
All prices plus VAT and carriage

AJS

3SL
LTD
3TSE

501/511 Crewe Road,
Wheelock, Sandbach,
Cheshire, CW11 0QX



3SL LTD
ACORNS LARGEST DEALER
ASK ACORN!

☎ Hotline
0270 761516
Fax 0270 768200



3SL
LTD
3TSE

Acorn Computers, Software, Peripherals, Epson Printers, Network Specialists.

A3010

A3010 1MB Action Pack	£339
A3010 2MB Learning Curve	£637
A3010 2MB + Philips CM8833	£539
A3010 1MB Upgrade	£55

A3020 / A4000

A3020 + Med Res Col Monitor	£675
A3020HD + Med Res Monitor	£825
A4000 2MB 80HD Med Res	£850
A4000 Home Office & LC	Please Ring
Multiscan Monitor	add £40

A5000 / A4 Laptop

A5000 2MB 80HD Multiscan	£1276
A5000 4MB 160HD Multiscan	£1446
A5000 Learning Curves	Please Ring
A4 Laptop 2MB FD	£1399
A4 Laptop 4MB 60HD	£1699

Ex Demo and Secondhand

Computers

Commodore PC10 8088 No Monitor	£50
Microvitec PC 8086 No HD & Monitor	£50
Philips PCD101/05 8086 PC No Monitor	£100
BBC B Issue 3	£150
Commodore Amiga A3000	£400
Commodore PC 20 Inc 3.5 & 5.25 & HD	£200

Disc Drives

Cumana CSX400S for BBC	£70
Cumana CS400S for BBC	£75
Cumana CD358 for BBC	£95
More old stock drives available	Please Ring

Monitors

Commodore 1084S Amiga Monitor	£100
Microvitec 1456 ML2 TTL	£100
Microvitec 1456 DA2 for Nimbus	£100
Microvitec 1446 DI2	£100
Commodore BM713 mono monitor. For PC	£50
Microvitec 1431MS for BBC	£100
Philips CM8833 Grade A	£149

Printers

Micro Peripherals MP165 Dot Matrix	£30
Brother HR20	£40
Star SD10 printer	£60
Epson LQ100	£100
Brother 1818 Dot Matrix	£100
Kodak 701 Bubblejet	£150
Integrex CJ132	£250
Integrex CJ132 Serial	£250
Epson LQ860 inc S/F	£300

Half Price New Software

Wordwise for BBC	£14
Wordwise + for BBC	£22
Spell Master 3.5" For Compact	£23

Spell Master for Arch	£23
InterBase for BBC	£25
InterSheet for BBC / Master	£18
Interword for BBC / Master	£22
InterChart for BBC / Master	£14
Mega 3 for BBC / Master	£38
Intersheet on disc for ARCH	£17
Spell Master for BBC	£23
Intersheet for Arch	£17
InterWord for Arch	£17
InterChart for Arch	£25
Scanlight Junior for A300/A400/A500	£120

TERMS:

All Prices are subject to V.A.T.
Carriage is F.O.C. on mainland UK, elsewhere at cost.
New equipment is covered by a **3 Year Warranty**, Free
Collect and Return, excluding laptops which is 1 year.
Ex Demo & S/H is covered by 3 Months warranty.
Credit Cards Welcome
Supplied with any Acorn System

**Compare these Prices
and Support**

VERBS

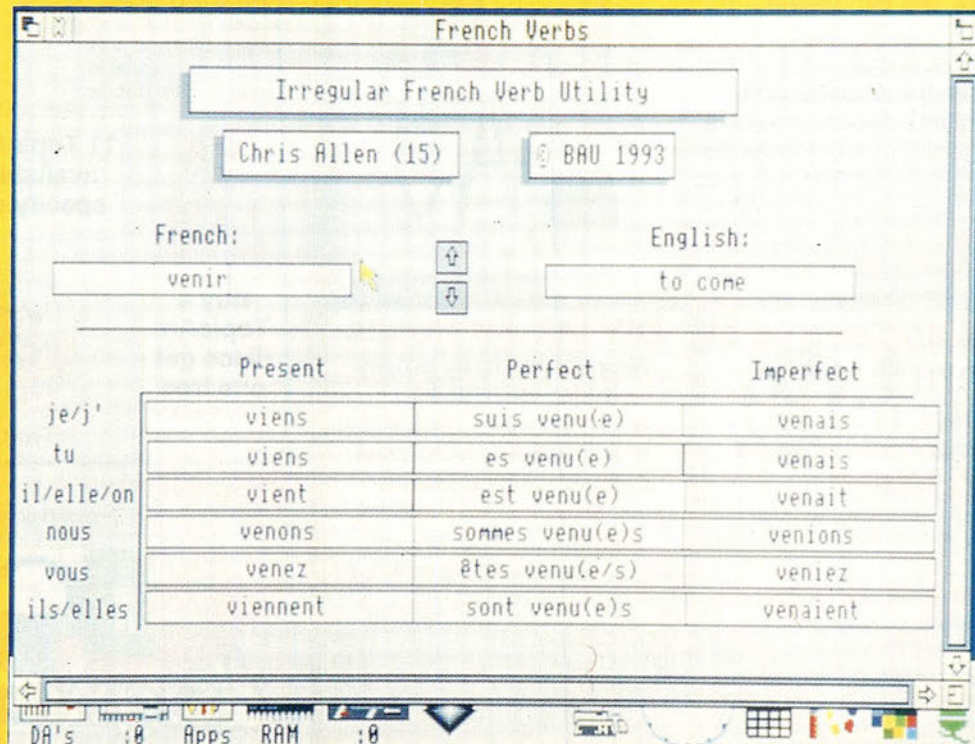
This should assist all those struggling with the irregularities of the French language; it's a full multi-tasking desktop verb tester. 15-year-old Chris Allen describes his utility:

'This application takes a lot of the boredom out of looking up irregular french verbs while you are writing an essay. It runs in Risc OS and, when you double-click on the icon, it loads up a window containing a number of icons.

'The "French" icon lets you type in an irregular French verb (aller, for example) and, when you press Return, the program searches for it. If you do not know the French, but know the English (to go) type that into the "English" icon. The program will search for it.

'If you just want to browse through the verbs you can do so with the arrow icons. There are about 50 verbs in its memory.

'Once it has found a verb the program will display some of the verb's tenses (say, present, perfect and imperfect). It will also show how the verb form changes as its subject alters (je, tu, il, elle and so on). This



information is all displayed in the table in the window. Some verbs bring up a notice at the bottom of the window.

If you click on this message the program will automatically go to the other verb mentioned.

Walkthrough of Frames

If you're fairly new to programming, you may like to study the follow brief outlines of the functions and procedures defined in Tim's Frames program.

PROCinit – initialise variables and arrays of dot positions, speeds and linkages.

PROCedit – interact with the user, reading the mouse position, checking for nearby dots, acting on mouse clicks.

PROCcheckdot – called by PROCedit, creates new dots, drags existing dots, redrawing links if necessary.

FNdrag – wait until mouse is moved from the current dot or mouse buttons are released.

PROCdragdot – (REPEAT loop) drag an existing dot, redrawing links, highlighting nearby dots. (after REPEAT) if link is attached to an old dot, shuffle framework and delete the 'extra' dot. Recalculate lengths of links connected to this dot.

FNfinddot – scan through array of current dots and return one if it is within a certain (small) distance of the given point.

PROCnewdot – add a new dot to the system.

PROCdelldot – delete a dot (and any associated links).

PROClink – (REPEAT loop) drag a new dot. (after REPEAT) add in this new dot and create the link data including its (untensioned) length.

PROCdellink – delete a link.

FNdist – distance between two points.

FNlink – returns the link number of a link connecting two points.

PROCerror – handle errors gracefully.

PROCswap – swap displayed and updated screen banks.

PROCredraw – redraw all links (and dots if asked).

PROCnomouse – wait until all mouse buttons are released.

PROCanimate – gravitate and bounce! (Up to PROCmouse) handle all keypresses to change parameters. (After PROCmouse) calculate movement of framework, allow for mouse to drag a dot. (After FOR dot=0 to dots) bounce dots off the sides of the screen and apply 'tautness' to each of the links moving the dots accordingly.

PROCmovedot – move a dot (if it's a movable dot).

PROCmovepos – calculate movement of the dot.

PROCclear – clear dots array.

PROCrec – set the mouse bounding box.

PROCmouse – return mouse co-ordinates to the nearest 4 OS units (1 pixel).

QuickTile (v1.01) £25+VAT

Up until now it has only been possible to print posters from Draw & Sprite files. Now with QuickTile you can create posters from ANY RiscOS application. Simply enter the size of poster required and select PRINT directly from the application! QuickTile does the rest, printing each tile with crop marks & refs. **Requires RISCOS 3.10 or later. Send v1.00 disc back for free u/g. Tiler upgrade - £15+VAT**



TopicArt

A new form of clip art comprising of single discs containing approximately 50 hand drawn high quality draw format clip art images, each on a single subject. Site and area licences are available, please ring for details.



TopicArt9 - Dinosaurs

Subjects available
1 - General
2 - Transport
3 - Costumes
4 - Entertainment
5 - Bugs 2 Slugs
6 - Road Signs
7 - Sports Equip
8 - Sports Figures
9 - Dinosaurs
10 - Symbols
11 - Tools
12 - Animals

£8
+ VAT
per disc

11 TopicArt subjects are available now. Please specify when ordering.

**Buy 4
TopicArt
discs get
one free**

Not inc SpecialArt



TopicArt12 - Animals



TopicArt4
Entertainment

Come and see us at

**Acorn
WORLD 93**

SPONSORED BY BBC ACORN USER

Acorn Assist

Available to Teachers, Academics, Teaching Support Staff & full time Students. 13.75% Finance is avail.

Acorn Ext Warranty

1 Year On-Site Service

A3010, A3020 or A4000 £25

A5000 £34

3 Year Warranty & On-Site Service

A3010, A3020FD £42

A3020HD, A4000 £51

A5000 £68

Must be purchased at the same time as computer

DIY Ink Jet Refills

Why throw away empty inkjet cartridges...

...when you can refill them at a fraction of the cost

Colours available include

Cyan, Magenta, Yellow, Black, Red, Green, Blue, Brown

Single Refills (req an orig cartr.) £7

Twin Refills (req an orig cartr.) £12

Please specify colour(s) required

125ml Cleaning Kit £4

400ml Cleaning Kit £10

ColourSep software £15

Can be used with HP DeskJets, Canon BJ's (not BJ300) & others. Ring for further details.

SpecialArt

Special editions of TopicArt consisting of a minimum of 4 discs full of clipart



Xmas

Hardware & Books (All prices exclude VAT)

New Low Prices!

A3010 Series

Action Pack £339

TV output, 1Mb RAM, 2Mb Floppy, joystick ports, Zool, StartWrite, Demos

Learning Curve Sys £637

2Mb RAM, Std Monitor, Acorn Advance, PC Emulator & Demo's.

A3020 Series

Floppy Disc System £675

As A3010 LC but without the Learning Curve Software pack.

60Mb Hard Disc Sys £825

As above with 60Mb Hard disc.

Add £50 for MultiScan Monitor.

A4000 Series

2MHD80 System £850

2Mb RAM, 2Mb Floppy, 80Mb Hard disc, Standard Monitor.

Add £50 for MultiScan Monitor.

For 1Mb 386 PC Card add £225

For 4Mb 486 PC Card add £425

A5000 Series

All A5000's include MultiScan Monitor

2MHD80 System £1275

2Mb RAM, 80Mb Hard disc

A5000 4MHD160 Sys £1445

4Mb RAM, 160Mb Harddisc

Add £200 for CubScan 1440 Monitor

Learning Curve

Learning Curve Software Pack £42

This pack can be purchased with any of the above computer systems and includes Acorn Advance, PC Emulator and many demos of popular games & app's

Home Office

Home Office Pack £85

This pack can be purchased with any of the above computer systems and includes EasiWriter2, DataPower, PipeDream4, PC Emulator, and many demos of popular games & app's.

Pocket Bk/Psion

Acorn Pocket Book £212

Psion 3 256k £179

A-Link for either of the above £51

Call for other peripherals

A4 Portable

Free Sh. Bag, Sp Batt, PCE

A4 4MHD Portable £1699

4Mb RAM, 60Mb HD, 2Mb Floppy Disc, LCD Screen, PC Emulator.

RAM Upgrades

A3000 up to 2Mb £35

A3000 up to 4Mb £129

A3010 up to 2Mb £35

A3010 up to 4Mb £139

A3020/A4000 2Mb £79

A5000 2Mb £79

A5000 4Mb to 8Mb £399

A400 RAM £35 per Mb

A540 4Mb £255

Printers

Canon BJ-10sx £175

Canon BJ-10 Sht Fdr £49

Canon BJ-200 £279

Canon BJ-230 £309

Canon BJC-800 £1299

Canon BJC-600 £TBA

New A4, 4 Colour Printer

HP DeskJet 500C £299

HP DeskJet 550C £489

Add £35 for TurboDriver

HP LaserJet 4 600dpi £Call

LaserDirect HiRes4 £899

Scanners

ScanLight 256 £199

ScanLight Video 256 £215

ScanLight Professional £549

SCSI Card for above £139

Monitors

Acorn Colour AKF30/40 £210

Acorn MultiScan £249

add £10 for Archi/A3000's

Microvitec CubScan £399

0.28dp, 40 presets & 3 year warranty

Taxan 875+LR 17" £849

0.26dp screen resolution

Upgrades

386PC 1Mb/4Mb £390/£490

486PC 1Mb/4Mb £490/£590

A4k 1Mb 386PC Card £225

A4k 4Mb 486PC Card £425

5.25" Disc Buffer £39

ARM3 25Mhz £129

Colour Card (CC) £249

DeltaCat Joystick £29

Dust Covers 2 piece £12

Dust Cover A3070 £8

Floating Point Acc. £99

HD Controller+Drive £184

HD/SCSI Card+Drive £124

I/O Expansion Card £79

Joystick I/F (All M/C's) £28

Keyboard Ext Cable £15

Mini Expansion Card £65

Micro Mouse (Clare) £29

Mouse Port Splitter £19

Parallel Sound Sampler £41

Serial Upgrade A3000 £17

User/Midi Card A3000 £46

Digitisers

Hawk V9 MKII £259

Hi-Vision Col Digit'r int £129

Vision Mono Digitiser int £48

Vision Color Digitiser int £76

Vision Mono Digitiser ext £60

Vision Color Digitiser ext £89

RISCOS 3.1 A300 £63.83

RISCOS 3.1 Others £41.70

Add £4+VAT Carriage

Acorn Books

A30X0 Technical Ref Manual £29.95

A4 Technical Ref Manual £65.00

A540 Technical Ref Manual £65.00

A5000 Technical Ref Manual £65.00

Assembler Manual £25.00

ANSI C v4 Manual £25.00

BBC Basic VI Guide £19.95

1st Word+ Manual £10.00

DDE User Guide £25.00

DTP Manual £10.00

RISCOS 2 User Guide £15.00

RISCOS 3 PRM's £99.00

Add £7+VAT carriage for PRM's

Other Books

Archi Game Maker's Manual £14.95

Archi Assembly Lang Manual £14.95

Archi Operating System Guide £14.95

Begin. Guide to WIMP Prog. £12.95

Dabhand Guide to Impression £14.95

DTP on the Archimedes £12.95

Graphics on the ARM M/C's £14.95

Mastering 1st Word+ £13.95

First Impressions £35.00

Good Impressions £30.00

Ink Cart/Ribbons

BJ-10 Ink Cartridge £17

BJ-200 Ink Cartridge £18

BJ-300 Ink Cartridge £14

DJ-500 Bk Hi-Cap Cart. £23

DJ-500C/550C Colour Cart. £24

Swift24 Mono/Colour £7/£15

Ordering by Telephone

Please specify the goods you require and for which computer. Please have your credit/debit card ready. We will require the cardholders name, address, delivery address if different and the start & expiry dates of the card.

Ordering by Post

Please specify the goods you require and for which computer including your TELEPHONE NUMBER & delivery address. Send complete with a signed cheque/postal order or alternatively for credit/debit cards, the card number, cardholders name, address, and the start & expiry dates. IMPORTANT - Please write your name, address & credit card details in BLOCK CAPITALS to avoid confusion. Orders by post **MUST** be accompanied by a telephone number.

Where to Find Us

From the M63 Junction 12 roundabout follow signs to Cheadle A560 passing the glass pyramid. At the 2nd set of traffic lights turn left onto Brinksway. Turn next left onto Chester St and immediately left again onto Ford St. Enter on-site car park via Red Gates on the right hand side.

Terms

EC residents add 17.5%

VAT to all prices except

books. Carriage is free

(except books, paper &

large software applications)

on mainland UK, elsewhere

at cost. Only Credit/Debit

cards accepted for overseas

orders. Prices and

manufact's specifications

subject to change without

notification. Goods offered

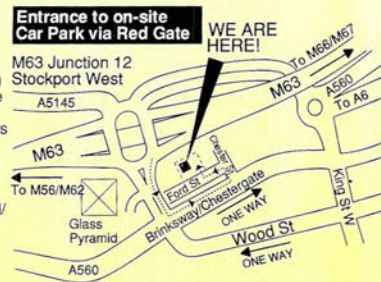
subject to being unsold and/

or available. Goods not

offered on trial basis.

Restocking fee on non-

defective returns. E & OE



Desktop Projects Ltd

Authorised Acorn Dealer (Tel: 061-474 0778, Fax: 061-474 0781)

Unit 1, Business Park, Ford St, Stockport, Cheshire. SK3 0BT

**All prices
exclude VAT**



QuickShow £25+VAT

The easy to use slide show presentation and video titling package. Create

!QuickShow

Video Titling

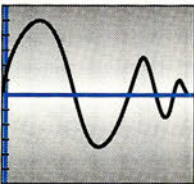
&

Slide Show Presentation
Has never been easier!

sequences of frames containing text of any colour with drop shadows, outline shadows and rubout boxes using the RISCOS fonts. Sprites can also be included in frames and positioned and resized as necessary. Several screens can be linked together with the sequencer which allows you to fade each screen out and in with the many fades provided. Completed sequences can be converted into stand alone applications. 2Mb RAM required and a hard disc is recommended.

QuickSnd £10+VAT

Load, play, convert & resave existing Armadeus, Tracker and raw data sound samples and apply special effects including Reverse, Echo, Max Vol, alter replay rate and resample frequency. Convert samples into modules for use with the RISCOS sound system etc. Create stand alone Utility modules which when called, via star commands, automatically play and then remove itself completely from memory (this feature is not available on any other sound package). Use Utility sound modules with RISCOS Alarm to play on activation of an alarm. On screen VU meter included.



Hard Discs IDE

The no nonsense RISCOS 3 compatible Hard Disc solution



The following are complete systems comprising of the NEW Desktop Projects IDE interface, hard disc, mounting brackets, cables, utilities disc and manual.

RISCOS 3.10 or later required.

Archimedes 3.5" Internal

Not suitable for A3k, A3010-A3020	
120Mb 16ms Cache	£250
170Mb 16ms Cache	£300
250Mb 13ms Cache	£350
330Mb 12ms Cache	£Call
520Mb 12ms Cache	£Call

A3000/Archi/A5000 External

120Mb 16ms Cache	£320
170Mb 16ms Cache	£370
250Mb 13ms Cache	£420
330Mb 12ms Cache	£Call
520Mb 12ms Cache	£Call

DTP IDE Disc Controller

Complete with cable, guide & disc	£79
Works with Conner, Quantum	
Samsung, Maxtor & Fujitsu.	

A5000 Second/Exchange Drives

For A5000's only.	2nd	Exch
120Mb 11ms Cache	£200	£150
170Mb 11ms Cache	£250	£200
250Mb 15ms Cache	£300	£250

HCCS A3000 IDE Hard Cards

20Mb Internal+User Port	£189
60Mb Internal+User Port	£279
80Mb Internal+User Port	£319
120Mb Internal+User Port	£379

HCCS Ultimate Multi-Podules

With IDE Hard Disc A3000 A3010

20Mb Internal	£239	£229
60Mb Internal	£319	£309
80Mb Internal	£359	£349

2 Multipodule slots are provided on the A3010 and 3 slots on A3000

SCSI

The following are complete hard disc systems comprising of a Morley SCSI uncached interface, hard disc, brackets, cables, utilities disc and manual.

Archimedes Internal

Not suitable for A3k, A3010-A3020

120Mb 18ms Cache	£395
200Mb 18ms Cache	£545
330Mb 12ms Cache	£Call
520Mb 12ms Cache	£Call

A3000/Archi/A5000 External

120Mb 18ms Cache	£475
200Mb 18ms Cache	£625
330Mb 12ms Cache	£Call
520Mb 12ms Cache	£Call

The above are ext units with card.

SCSI Controller Cards

Morley Uncached	£139
Morley Cached	£179

CD-ROM Multimedia

Acorn Multimedia Expansion System

£499

Comprises A4000 style case complete with power supply, SONY multi-session CD-ROM drive, pre-amplifier with headphone/phono inputs/outputs, CD caddy, etc. The unit can also house a 3.5" SCSI hard disc and another CD-ROM drive or Magneto Optical SCSI drive.

External Toshiba CD-ROM Drive (The fastest available)

£399

The above drive is a triple spin speed unit and is PhotoCD compatible. The unit is housed in its own case with power supply and comes with one caddy.

Magneto Optical Drives (SCSI)

128Mb Magneto Optical SCSI Drive 28ms 1" high

£699

The above unit is a bare drive and can be mounted in the spare floppy bay of an A5000 or in an external case for other machines. SCSI interface extra.

External case for above

£69

128Mb Blank Discs

£39

A5000 Econet SCSI Interface

£49

Add £139 to above prices for Morley SCSI Interface.

Archimedes, A3000, A5000 Software

Applications

ABC Compiler (Oak)	£77	PC Emulator (Acorn)	£95
Advance (Acorn)	£95	PenDown Plus (Longman)	£68
Ancestry (Minerva)	£59	Pin Point (Logotron)	£79
Arc DFS (Dabs)	£22	PipeDream 4 (Colton)	£119
ArcComm2 (Logotron)	£52	Playback (RISC Dev)	£17
ArcLight (Ace)	£40	Poster (4Mation)	£75
ArcTerm 7 (Serial Port)	£62	Presenter 2 Hotlink (Lingenuity)	£33
Artist (4D)	£20	Presenter GTi (Ling)	£66
Armadeus (Clares)	£65	Pro Artisan (Clares)	£79
Artisan 2 (Clares)	£49	ProArtisan2 (Clares)	£110
Art Works (CC)	£129	ProDriver DJ500C/550C (Ace)	£39
AUN/Level 4 FileServer (Acorn)	£395	Realtime Solids Modeller (Sil)	£99
Autosketch v2 (Autodesk)	£65	RemoteFS (Atomwide)	£45
Cable News (Lingenuity)	£165	Render Bender v2 (Clares)	£99
CADet (Minerva)	£139	Resultz (Colton)	£119
Chameleon 2 (4Mation)	£139	Revelation II (Logotron)	£110
ColourSep (ICS)	£15	Revelation ImagrPro (Logotron)	£127
Compression (CC)	£35	Rhapsody v2 (Clares)	£49
DataPower (IOTA)	£129	Rhapsody v3 (Clares)	£79
Desktop Assembler (Acorn)	£125	RISCType (CIS)	£16
Desktop C (Acorn)	£180	Rythmn Bed (Clares)	£40
Desktop Office (Minerva)	£95	S-BASE Personal (Longman)	£79
Desktop Thesaurus (RISC Dev)	£19	S-BASE Developer (Longman)	£175
Digital Symphony (Oregon)	£43	S-BASE Developer + (Longman)	£275
Draw Print-Plot (Oak)	£39	Schena (Clares)	£99
EasiWord 2 (Minerva)	£55	Serenade (Clares)	£109
EasyWriter II (Icon Tech)	£126	ShapeFX (Datastore)	£9
Einstein (Ace)	£106	ShowPage (CC)	£130
Equisor (CC)	£37	Sleuth (RISC Dev)	£47
Euclid 2 (Ace)	£55	SmArt (4Mation)	£50
Eureka v2 (Longman)	£99	SmArtFilter (4Mation)	£32
Font FX (DataStore)	£9	Snippet (4Mation)	£35
Gammapiot (Minerva)	£36	Sound FX Maker (CIS)	£32
Genesis 2 (Oak Solutions)	£109	Speech! (Superior)	£15
Graphbox v2 (Minerva)	£57	Splice (Ace)	£27
Graphbox Pro (Minerva)	£109	Squirrel Manager (Dig Serv)	£120
Hard Disc Companion II (RISC)	£45	Squirrel 'C' Developers Toolkit	£99
Hatchback (4Mation)	£35	StarWrite (Icon)	£55
Hearsay II (RISC Dev)	£69	TechWriter (Icon)	£159
Hotlink Presenter (Lingenuity)	£41	Titler (Clares)	£119
Home Accounts (Minerva)	£34	Topographer (Clares)	£69
Illusionist (Clares)	£79	Touch Type (IOTA)	£39
Imagery (Palette Studios)	£69	Tracker (Serial Port)	£37
Impression Publisher (CC)	£135	TurboDrivers Canon BJ (CC)	£42
Impression Style (CC)	£85	TurboDrivers HP (CC)	£42
Impression Bus Support (CC)	£39	Turbo-Type (CIS)	£20
Inter-Sheet II (CC)	£30	Tween (Ace)	£27
MasterFile III (RISC Dev)	£47	TypeStudio (RISC Dev)	£43
Midnight Express (Mid. Graph.)	£39	Vector (4Mation)	£75
Mogul (Ace)	£20	Vox Box (Clares)	£49
Morpheus (Oregon)	£28	WordWorks (CC)	£38
Notate (Longman)	£54	Wordz (Colton)	£95
Ovation (RISC Dev)	£95	Worra CAD (Oak)	£83

Games

A3010 Stick Controller (Arm-T)	£17	Loopz (Audiogenic)	£19
Aggressor (Atomic)	£19	Lotus Turbo Challenge II (Kris)	£19
Air Supremacy (Superior)	£17	Mah-Jong Patience (CIS)	£15
Alderbaran (Evolution)	£26	Mah-Jong The Game (CIS)	£19
Axis (TBA Software)	£19	Man United Europe (Krisalis)	£19
Bambuzle (Arxe Systems)	£19	Micro Drive 2 (CIS)	£26
Battle Chess (Krisalis)	£22	Mig-29 Fulcrum (ARM2/3) (Dom.)	£25
Black Angel (4D)	£26	Nebulus (Krisalis)	£19
Blaston (Eterna)	£15	Oh No More Lemmings (Kris)	£15
Blitz (Arxe Systems)	£15	Omar Sharif's Bridge (Krisalis)	£22
Boogie Buggy (4D)	£19	Orion (Minerva)	£15
Break 147 & Superpool (4D)	£26	Pandora's Box (4D) 2Mb	£19
Bug Hunt, MoonDash (Min)	£15	Paradroid 2000 (Coin-Age)	£19
Bug Hunt in Space (Minerva)	£15	Pesky Muskrats (Coin-Age)	£19
Cataclysm (4D)	£19	Play It Again Sam 1 (Superior)	£19
Champions (Krisalis)	£22	-Includes Conqueror, Rotor, -No Excuses & Hostages	
-Includes Man Utd, J Khan Squash, -Wild Class Leaderbrd & Boxing Mng		Populus (Krisalis)	£22
Chocks Away 2 (4D)	£19	Powerband (4D)	£19
Chocks Away Extra Miss(4D)	£15	Quark (Oregon)	£19
Chocks 2 Compendium (4D) 2Mb	£26	Quest for Gold (Krisalis)	£19
Chopper Force (4D)	£22	Repton 3 (Superior)	£19
Chuck Rock (Krisalis)	£19	Repton 4 (Superior)	£19
The Crystal Maze (Sherston) £TBA		Real McCoy 2 (4D) 2Mb	£26
Cyber Chess (4D)	£26	-Includes Apocalypse, Holed Out, -The Olympics & Inertia	
Cycloids (Software 42)	£19	Real McCoy 3 (4D) 2Mb	£26
Demon's Lair (4D)	£26	-Includes Powerband, Nevryon, Drop - Ship & The WIMP Game	
Dreadnoughts (Turcan)	£26	Real McCoy 4 (4D)	£26
Dungeon (4D)	£26	-Includes Galactic Dan, Grievous -Bodily ARM, Cataclysm & X-Fire	
Elite (Hybrid)	£32	Saloon Cars Deluxe (4D)	£26
Enter the Realm (4D) 2Mb	£19	Saloon Cars Del Extra Courses	£15
E-Type Compendium (4D)	£19	Serpents (CIS)	£15
Fervour (Clares)	£17	Sim City (Krisalis)	£26
FRED (Software 42)	£19	Spheres of Chaos (Matt Black)	£19
Galactic Dan (4D)	£26	Stunt Racer 2000 (4D)	£26
Games Wizard (Leading Edge)	£19	Superior Golf (Superior)	£15
GODS (Krisalis)	£19	SWIV (Krisalis)	£19
Gribbly's Day Out (Coin-Age)	£19	Technodream (Superior)	£19
Guile (Dream)	£22	ThunderMonk (Minerva)	£15
Heimdall (Krisalis)	£22	Tiles (Brain Games)	£15
Hero Quest (Krisalis)	£22	Top Banana (HEX)	£15
Holed Out Compendium (4D)	£19	Twin World (Cygnus)	£15
Ibix the Viking (Minerva) (OS2)	£15	Virtual Golf (4D)	£26
Iron Lord (Cygnus)	£15	Waterloo (Turcan)	£19
Ixon (Software 42)	£19	X-FIRE (4D)	£19
James Pond (Krisalis)	£19	Xenon2 (Gamesware)	£TBA
Kerbang (Eterna)	£22	Zarch (Superior)	£15
Krisalis Collection	£22	Zool (Gremlin Graphics)	£20
-Includes, Mad Professor Mariarty, -Pipemania, Terramex & Revelation		2Mb - RAM required for RISCOS3.1	
Last Ninja (Superior)	£19	OS2 - Runs on RISCOS2 only	
Leg. of the Lost Temp (ARM2/3)	£19		
Lemmings (Krisalis)	£19		

Education

Adv. Playground 5+ (Storm)	£17
Amazing Ollie 4+ (Storm)	£14
Arctecture I-Romans 8-9	£28
Arctecture II-Egyptians 10-12	£28
Badger Trails (Sherston)	£37
Coffee 9+ (Storm)	£28
Concept Designer (Logotron)	£23
Crossword+ 8+	£19
Crystal Rainforest (Sherston)	£35
Darryl the Dragon (4Mation)	£19
Desktop Folio (ESM)	£89
Farmer Giles 2 (CTS)	£17
FirstLOGO (Longman)	£22
First Words & Pictures (Chk)	£26
Flight Path 9+ (Storm)	£28
Freddy Teddy (Topologika)	£19
Freddy Teddy's Adv (Topol.)	£17
Fun & Games 5-9	£18
Fun School 2 (Database)	£15
Fun School 3 (Database)	£18
Fun School 4 (Database)	£18
(Please spec. age group <5, 5-7, >7)	
Giant Killer (Topologika)	£17
Granny's Garden (4Mation)	£23
House of Numbers (Chalk)	£19
Junior Database (Iota)	£45
Letters and Pictures (Chalk)	£18
Logo (Logotron)	£60
Magpie (Logotron)	£49
Maps & Landsc. 1/2 (Chk) ea.	£19
Nature Park Adventure 7-9	£27
Naughty Stories (Sherston) ea.	£10
Naughty Stories set of 6 (Sh)	£48
Noddy's Playtime (Jmpg Bean)	£21
Numbers and Pictures (Chalk)	£18
Ollie Octopus Sketch Pad (Storm)	£14
Pin Point Junior (Logotron)	£23
Pirate (Chalk)	£18
Puncman 1-2,3-4,5-7 (Chalk) ea.	£18
Reversals (Chalk)	£18
Search & Rescue 9+	£22
Smudge the Spaniel (Storm) 4-8	£28
Spellbook 4-9 (Soft Stuff (SS))	£19
Splash 7-11yrs (Sherston)	£19
10/10 Early Essentials <7yr	£19
10/10 English 6-16yrs	£19
10/10 Maths (Number) 6-16yrs	£19
10/10 Maths (Algebra) 6-16yrs	£19
Things to do with No's (SS)	£19
Things to do with Words (SS)	£19
Wizard's Revenge 9-11	£20
Words and Pictures (Chalk)	£18
Please call for titles not listed	



Desktop Projects Ltd

Please contact us if you are offered a better price elsewhere, we will do our best to match it. We operate the Acorn Teachers Scheme. Special offers do not apply to Finance and Acorn Assist Scheme. This document was produced entirely on the Archimedes using Impression, ArtWorks, Draw & Paint.

All prices
exclude VAT

Tel: 061-474 0778



NOV 93

Blood SPORT



**Knuckle bruising, rib-cracking,
jaw-smashing martial arts action!**

Face the world's deadliest
street fighters in a gruelling contest.

Are **you** tough enough to win?

For all Acorn RISC OS computers.
Only available by direct mail order.
Budget software price. Only £9.99

For full details of our
extensive range of
quality clip art and
games send for our
free colour catalogue.



- 10 lethal opponents.
- 16 savage moves.
- 1 or 2 players.
- Agility challenges.
- Adjustable difficulty.
- Animated backdrops.
- Keyboard or joystick control

No VAT
Add £2 P&P
P.O. Box 42
Peterborough
Cambridgeshire
PE1 2TZ
© 0733 315439

We are fully qualified
ACORN EDUCATIONAL DEALERS

THE DATA STORE

Whether you want the latest game, advice on what to buy, technical or programming information, repairs, spares, or just a pleasant chat about what's new, you'll always be welcome to drop in to see us. You never know, you might spot something unusual amongst our full range of peripherals and software for all Acorn computers. But if you're too far away, why not try our mail-order service? After all, we're celebrating our tenth anniversary this year, so you'd might as well make use of our experience!

**6 CHATTERTON ROAD,
BROMLEY, KENT BR2 9QN**
Tel: 081-460 8991 Fax: 081-313 0400

High Density/SCSI (inc drive)	£224
High Density only - upgradeable (inc drive)	£184
SCSI only - upgradeable	£149

We now produce the ex-ARXE SCSI/HD systems, allowing you to replace your floppy with a high density (1.6Mb/1.44Mb) drive.

Requires RO3.10 or later. PC emulator compatible. HD or SCSI to HD&SCSI: £49.

Please specify machine type when ordering.

v32bis (14400 bps) FaxModem bundle	£359
------------------------------------	------

BT Approved USR Sportster FaxModem,
ARCterm, ARCfax & a cable - It's quick!

ARCterm 7	£68
ARCbbs (3 line version)	£85
High performance dual serial card	£79
PC Keyboard/mouse interface	£89
A5000 - 170Mb 2nd hard disk	£229
20Mb Floptical disk systems	from £349
External Quantum 240Mb SCSI	£349
External Fujitsu 496Mb SCSI (over 2Mb/sec)	£799
External Fujitsu 120Mb Mag-Opt (inc 1 disk)	£849
Newton MessagePad™ (ARM powered)	£510

As used by ARM Ltd's senior personnel!

Insured delivery on modems/storage systems £10+VAT.
Education is entitled to a 5% discount on all our products.

Please add VAT at 17.5% to all prices. Plastic welcome.

THE SERIAL PORT



Our shop in Wells is now
open at 15 Union Street
(Union Street is next to Dixons)

See us at Acorn World
Stand 52

The Serial Port
Burcott Manor, Wells,
Somerset, BA5 1NH

Telephone	(0749) 670058
Fax	(0749) 670809
Modem	(0749) 670030
ISDN	(0749) 670883

Read all about it
as John Rennie
shows you the
DTP skills needed
to produce a
one-page
newsletter

LEARNING CURVE

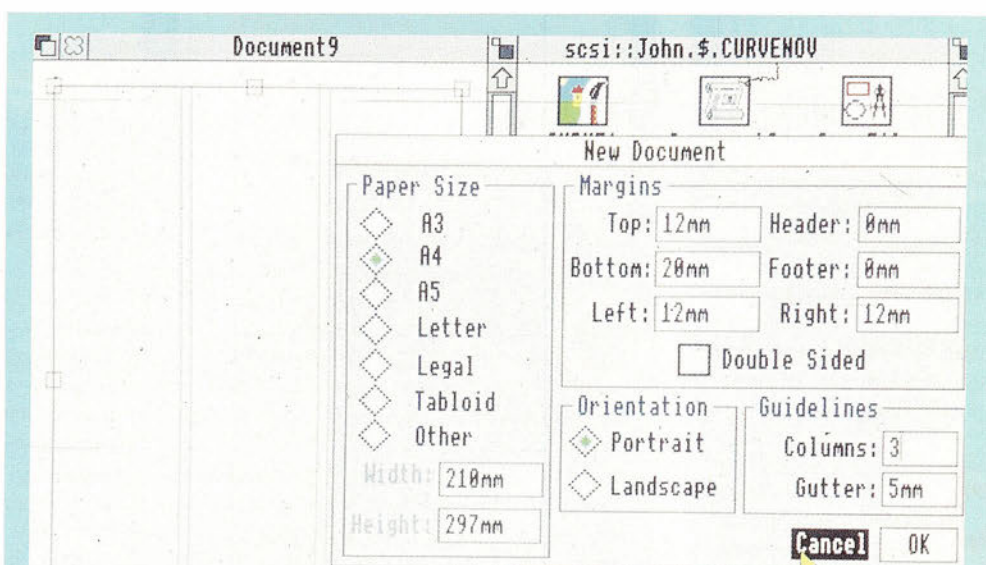
Over the past three months we have looked at some of the nuts-and-bolts stuff of using the Archimedes. You have learned how to write, how to draw and how to paint pretty pictures. OK. Now that's out of the way we might as well get straight on with the serious stuff. Let's produce a newspaper.

Well, alright. I've only got two pages and you are not Rupert Murdoch with a staff of hundreds. What we can do is produce a one-page newsletter that demonstrates the basics of laying out an editorial page with a cheap DTP package.

At £99, *Ovation* isn't as fully-featured as some, but it is quick to get the hang of and the essence of layout is doing the simple things well. *Ovation* has the tools for the job.



changes to a crosshair. Position at the top-left of the third column, click again and drag out the text box to cover the whole column. Where you release the mouse button the box stops; it snaps to the column guides and, for fine-tuning you reshape the box by dragging out the



1

First load *Ovation* on your iconbar with a double-click. We need to decide on page layout first. Take a look through *Acorn User* to get an idea of how different layouts are used for different pages. News is given four columns, broken into small stories, shorter stories to the bottom of the page; the photo is at the head of the story, and all the space on the page is used; the effect is busy. Features are longer, at least a page, and over three

or sometimes two columns. They have a more flexible layout; the text is broken by display quotes and crossheads (see below) and pictures, even headlines, do not have to appear at the head of the story. Anything goes, but before you start playing around you need the discipline of a layout. Hit the Menu mouse button over the *Ovation* icon and select New Document. Most of the defaults are fine for this job: A4 paper size; portrait (upright). Our page combines news and features, so we use a three-column grid. Click OK and the page is up.

2

The toolbox is at the screen base. The application is based on boxes: text can only sit within text boxes, selected by clicking on the 'T' tool; graphics can only live within graphics boxes, produced by the third tool. Click on the T, move to the page, click again and the pointer

red edge boxes shown. Go into the main menu and select Object. Go to Modify Frame and change the colour setting in the dialogue box to light grey. This is the first step to creating News in Brief. For the title box, repeat with a smaller text box and tint black. Drag out the edges until it is flush with the main box. Clicking in this box activates the text tool. Set Font to 18 point Homerton Black and centre it in the Format submenu. The box text is Homerton. There is no need to create new text boxes: the headline box automatically repels copy in the larger box. Headlines are as 'news in brief' but upper and lower case. Body copy is standard Homerton nine point with 20 per cent leading – so space between the lines is 120 per cent the size of the characters. If headlines don't fit, as with the final story, squeeze the horizontal plane: here, Horizontal Size is cut from 100 to 90 per cent.

3

Now for your main feature. Use Trinity 9 point for body copy. This has a softer look than the news. We start with a capitalised first word. Click in the Format sub-menu and make sure the text is justified (flush to both column



gutters) unlike news. To allow copy to run into successive columns, link them. Click on the rightmost tool (the chain) then Select and drag from column one to column two. An arrow shows the text flow.

4

The crossheads – Shock, Horror – break up the text. After a crosshead, ensure your paragraph starts full-out to the left. Subsequent paragraphs are indented. Our quote is designed not only to



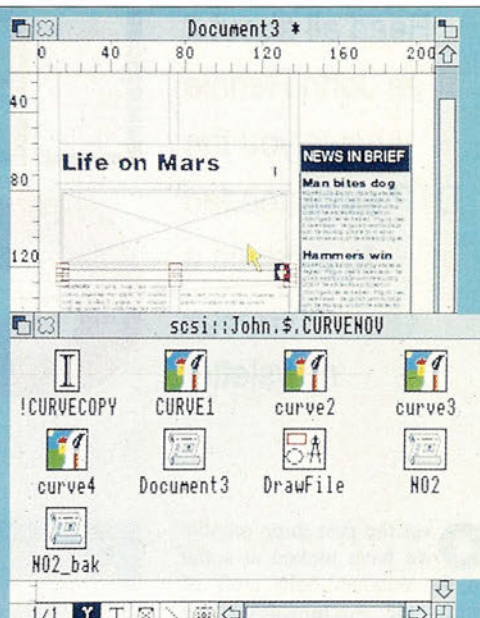
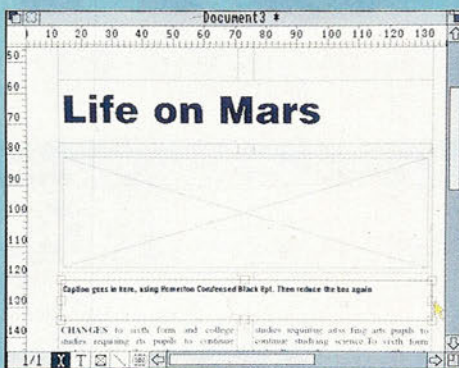
break the text but to hook the reader. Draw a text box over your body copy; this repels the body text. Using the same typeface at 18 point, type in your quote and centre it.

5

Now for your headlines, picture and caption. The headline text box is drawn out, as before. This time the font we use is 36 point Homerton Black.

The size of the picture box is a moveable feast, depending on how much you can cut and therefore shift down, your body copy, and how much you can crop your picture to fit. Whether you use a one- or two-deck headline will, likewise, depend on these other factors. You have to use your judgement to juggle the elements to fit.

The caption box can be a bit fiddly. To get at this



it is best to use an oversized box to start. Type in your copy in Homerton Black Condensed 8 point; then when you know that you have got it right, just squeeze the text box to size again.

6

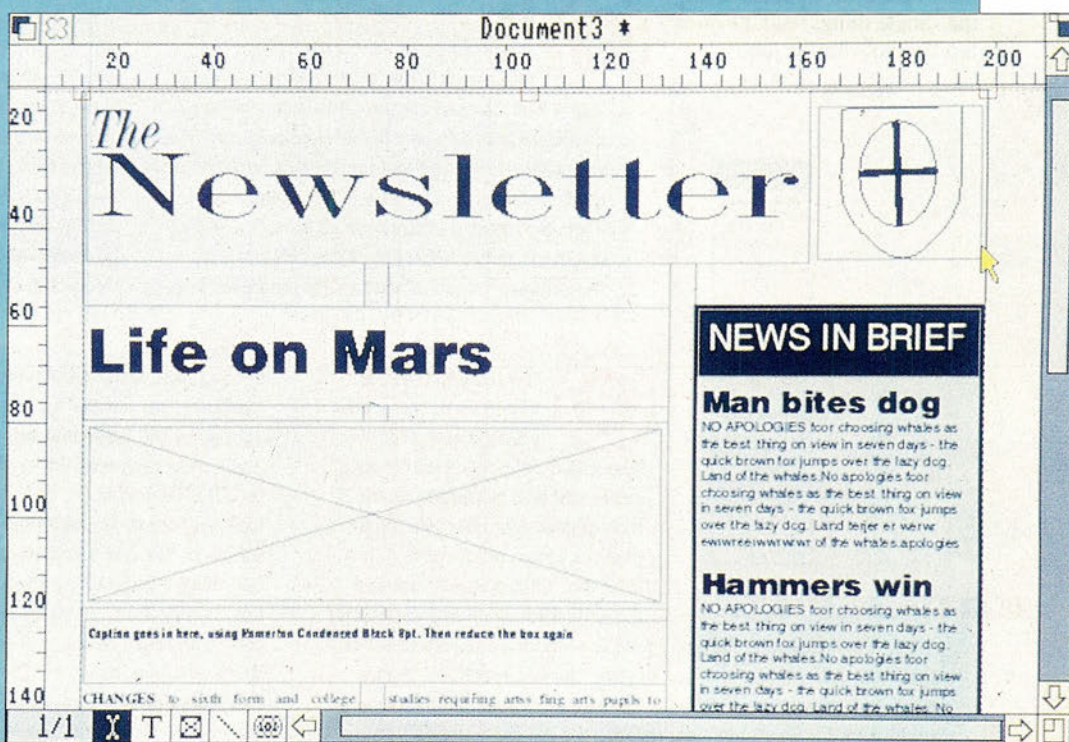
Finally your masthead and logo. The masthead (title) is in Italian font. This makes a stylish contrast to the harder news face and the conventional font we have used for features.

The 'The' is then put into superscript and italic. 'Newsletter' is then stretched horizontally by 180 per cent. You will find these in the Style submenu. By using Leading, in the Format menu, you are able to reduce the vertical space between the two words.

Then you can return and backspace between the two words until you are happy with the space between the two.

Kerning, in the Style menu, allows you to narrow the gaps between the letters in 'Newsletter'. This means you can stretch the word without ludicrous amounts of open space.

For the logo, simply draw a graphics box and drop in the Draw file or Paint sprite of your choice. You can design your own or use a piece of clip art.



The ELECTRONIC FONT FOUNDRY

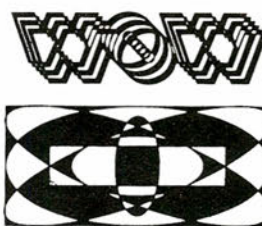
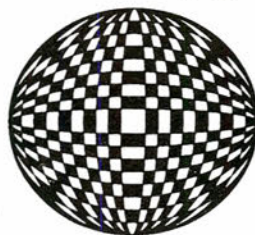
Eff

ELECTRONIC

font
FOUNDRY

DRAWMERGE - £9.99 INCLUSIVE

DrawMerge will take any number of objects in a drawfile and combine them to produce amazing patterns, effects, stencils, in fact whatever you like. Comes complete with manual and examples.



EFF Pack 35

Save 90%

£35.00 OS2

£40.00 OS3

The 35 Standard PostScript Fonts as found in most printers from only £1.00 each

EFF Times
EvenWriter
Michael

ITC Avant Garde
Swiss1
Swiss3 (Condensed)

NewSchBook
ITC Bookman
Dingbats & MathGreek

Script Pack 2

Save 80%

£20.00 OS2

£25.00 OS3

aidan
Rococco

Asia
Shel

Bronze
Shel Italic

Decorative Pack 4

Save 90%

£20.00 OS2

£25.00 OS3

Ancient Briony
Ascot Fortuna Regular
Basia Marilyn Regular

SHARAKU
SILONE
TWOMBLY BOLD

UTAMARU
Wild West
Yates

The Publishers Pack

Save 80%

£20.00 OS2

£25.00 OS3

LondonA 1
LONDONA TITLE
LondonA Expert Set 1
PETERS

Regular, *Italic*, **Bold** & **Bold Italic**
REGULAR
Regular, *Italic*, **Bold** & **Bold Italic**
REGULAR

ABC abc 123
ABC 123
ABC¹/₈³/₈⁵/₈ffffi7
ABC 123

The Engravers Pack

Save 85%

£15.00 OS2

£20.00 OS3

Bronze
Eve Open
Frederic Hand Tooled
PETERS
Wedding

Regular
Regular
Regular
REGULAR
Regular

Elegant Script
Open face
Hand Tooled
ENGRAVED
Blackletter

Abc 123
ABC abc 123
ABC abc 123
ABC 123
ABCabc 123

If you are ordering Risc OS 3 Fonts
why not ask about !DrawKern
Full Autokerning fonts in Drawfiles
for only £9.99 inclusive

Without DrawKern **WAVE**

With DrawKern **WAVE**

EFF Demo Disk with a FREE Outline Font for £3.00 inclusive

Plus samples of over 50 other great Outline Fonts, version 1.2 of our FontFinder
Font Database, a massive poster showing all of our fonts and our new 8 page price list.

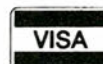
OVER 500 FONTS FOR ACORN COMPUTERS
LATIN 1 (ENGLISH) FONTS £5.00 OS2 AND £6.00 OS3

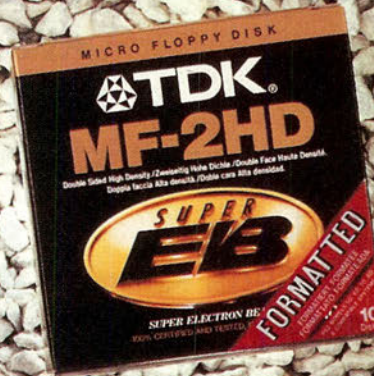
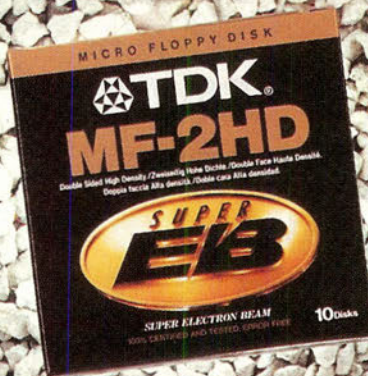
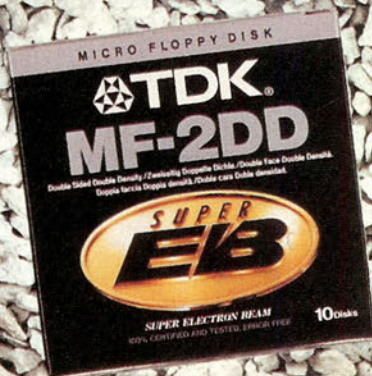
THIS OFFER EXPIRES ON THE 30TH OCTOBER 1993

How to order from EFF

All prices exclude postage and packing and VAT. Add up the cost of your order add P&P and then add VAT at 17.5%. P&P for fonts is £2.50. Handling Charge on official orders under £30.00 requiring an invoice £5.00.

The Electronic Font Foundry
The Studio • Gibbs House • Kennel Ride • Ascot • Berks • SL5 7NT
Tel 0344 891355 Fax 0344 891366





DATA STORAGE

Play school

Applying gameplay to teaching is a great idea... in theory. Richard Garrett finds some games meet the dual demands better than others

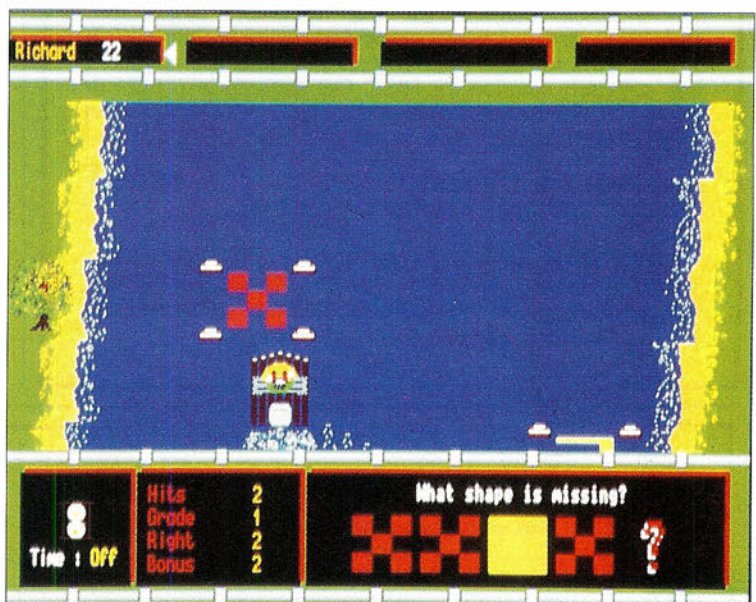
This suite of educational games for students of ages six to 16, is designed to complement Attainment Level 3 (Algebra) of the Mathematics National Curriculum.

Each full-screen game: *Graphoid*, *Processor*, *Chain Up*, *Hook It!*, *Turbo Raft* and *Rib Tickler* has six levels and sends results to an in-built marking system, which shows how the player is progressing. *Graphoid* is an outer space variant of

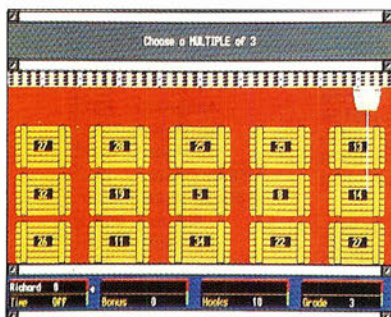
which columns of numbers are connected by a mathematical operator and a number. To play, the child fills in blank spaces in the columns by selecting right numbers from two conveyor belts. Problems start with simple addition and subtraction, up to interpretation of formulae and inequalities.

In *Chain Up*, the screen is split into two and the child connects facts in the bottom half of the screen to those in the top. This means matching pairs of odd and even numbers, matching co-ordinate pairs and straight line formulae to graphs, and identifying common graph families (straight lines, squares and sine curves).

In *Hook It!* the child answers by directing a hook towards their choice number or formulae. To make things harder, the answers displayed change rapidly so, just as you think you've got the right one, it dis-

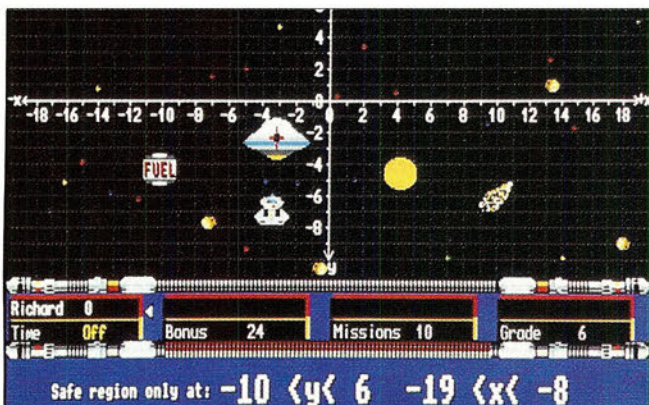


Hookit trying to grasp the right answer



Up the creek without a pattern

Battleships. At lower levels, this means identifying co-ordinate pairs but higher levels require you to map points on to straight lines and move the ship into safe regions. *Processor* depicts a machine, on



Graphoid: in space, no one can hear you doing algebra

appears. The tasks include completing numeric sequences, recognising algebraic terms (square, multiple, factor, cube) and solving linear equations.

Turbo Raft is an arcade game where children answer questions by driving a boat up a river, running over correct answers in mid-stream while avoiding incorrect ones. Most tasks are completing sequences of shapes or numbers. This is the game I found most fun to play but it's pretty slow. Finally, *Rib Tickler* is a multiple choice quiz about algebra.

The chief selling point of this package is its marking facilities. When a child completes a game level he receives a score and a verbal rating ranging from pathetic (not very encouraging) to genius. These scores are stored and can be displayed in an Achievement Record. This table correlates game objectives with specific

National Curriculum attainment target levels.

Conclusion

Although the marking in this Algebra package is sophisticated, the games range from mildly entertaining (*Graphoid*, *Turbo Raft*) to dull (*Hook It!*). For kids who have tried real computer games, thinly disguised tests are not likely to hold their attention for very long.

Of course, it's good to see software that helps with the National Curriculum, but it seems a shame not to depart further from this traditional approach.

Product details

Product: Maths Algebra
Supplier: 10 out of 10 Educational Systems
Tel: (0742) 780370
Price: £25.95 including VAT.

T Turing Tools

149 Campbell Road, Cowley
Oxford, OX4 3NX, UK
Tel. (0865) 775059

SpoilSport

RISC OS 3.x System Defense Kit

"They rename the hard disc... scramble the configuration... turn off the auto-boot... reset the system clock... do factory resets..." The solution is SpoilSport. £30.00 inc.

IronMask 2.1

Multi-user File Security System

'Frozen' directories or application folders are made unchangeable except by the IronMask superuser. 'Shielded' files are made completely inaccessible except to their owners. User authentication. Failsafe encryption. The software solution for RISC OS security in school or office. £75.00 inc. (IronMask 1.2 Personal Edition now only £49.00)

IronMask 2.1 + SpoilSport £90.00. 10% OFF all prices for prompt payment (14 days).

Prices quoted for 1 computer. British Isles postage included. Overseas add £3.00. £ for educational and site prices, further information or factsheets. Allow 14 days delivery.

The speedy solution for the production of leaflets or flyers!

FLYPRINT

Make attractive, cost effective:

Adverts / Raffles / Notes / Slips / Memos & Tickets with serial numbers, in any quantity.

Variable Height (from 3" up to A4) Colour Options

System Requirements

Any 32 bit Acorn Any Epson Compatible printer

Software with examples & manual

Only £39.97



Dixon & Dixon

AVAILABLE SOON!

DeadCert

Certificate Maker for Acorn Computers

LOOKING FOR A BARGAIN!

A3010 Action Pack

The pack includes the game ZOO! and word processor Starwrite plus interactive demonstration software only £399.00

A3010 Learning Curve

The pack includes monitor, PC Emulator with DR DOS 6 and Acorn Advance software. (wordprocessor, spreadsheet, database & graphics package) only £749.00

Seikosha SL 95

24 pin COLOUR printer .. only £244.00

Fax Machines form B.T

DF 100 Fax/Phone only £299.00

DF 200 Fax/Phone/TAM £399.00
(State colour - Black or White)

This is only a small selection of the items we can provide. Please call with your requirements.

FREE Catalogue sent on request

MILKMAN

Door-step delivery management system for Dairymen, B.M.B's & Farmers.

Boost Sales, Profit, Efficiency & Image

Produce delivery / collectors lists, receipts, float load, holiday reports & much more !!

Comprehensive service throughout the UK
Please call for more details

INKJET CARTRIDGES

Canon BJ10 £18.99
Canon BJ200 £21.99
HP Inkjet single capacity £21.15
HP Inkjet double capacity £28.95
Ink Refill Kits twin pack £11.95

We also stock a wide range of printer ribbons, laser toners, discs, listing paper & software.

ACCESS & VISA Accepted

Tel or Fax 091 2853042

Send your order with Cheque / P.O.s to

Dixon & Dixon

Dept AU 11, 35 Rokeby Drive, Kenton,
Newcastle Upon Tyne. NE3 4JY

ALL PRICES INCLUDE VAT & POSTAGE (UK Mainland Only)

Liquid Silicon

Computers • Hardware Upgrades • Software • Cables & Accessories •

COMING SOON

!Slinker - A low-cost utility which allows files and applications to be transferred easily between two machines through a serial link. It also has a talk facility.

!BarCoder - Creates Draw files of EAN13 product codes and also supports Telepen and binary formats. Call for further information on either of these.

Improve your A3010 display. Either use our Scart lead for enhanced TV display or upgrade to a SVGA monitor for more serious use, but without the cost of a high-end multisync.
Scart & audio monitor/TV lead - £10.95
SVGA monitor, low radiation - £269

For the serious joystick user, Nintendo style Pro-Pad controllers are now available for the Arc. For £48.95, you get two controllers and all the software necessary to drive almost any game. Play Axis with one hand! Also available singly.

ARM with FPA socket - £165

ARM 3 WITH FPA CHIP FITTED - £239

Both fit A300, A400, A3000, A3010-Mez

Keyboard gloves - highly durable but flexible type-through polyurethane covers which protect against spills, dust, ash, food and staples etc. As used by Allied Forces.
Available for A3000, A4000 or A5000 - £26.95

FREEPOST EH2725, Kirkcaldy, Fife
KY2 5BR

Tel: (0592) 260512

Run by enthusiasts for you
All prices include VAT and postage

Official orders and callers welcome

Acorn Authorised Dealer

Memory Upgrades

A3000 1-2 Mb - £55
A3000 1-4 Mb - £116
A3010 1-2 Mb - £35
A3010 1-4 Mb - £129
A5000 2-4 Mb - £88

Bare Hard Drive Prices (e.g.)

170 Mb Quantum, IDE/SCSI - £240
240 Mb Quantum, IDE/SCSI - £315
525 Mb Quantum, IDE - £685
525 Mb Quantum, SCSI - £745
Add £18 for A5000 second drive kit

Miscellaneous

External keyboards for the A4 portable

Membrane keyboard - £39.95
Tactile keyboard - £44.95

Acorn/Logitech Mouse - £28

ColourCard - £280

ColourBurst card - £379

Floating Point Accelerator chip - £115

LaserDirect HiRes 4 - £1099

LaserDirect HiRes 8 - £1550

Printer Port Sampler - £45.95

RISC OS 3 PRM - £99

Roland RP11 SketchMate Plotter - £579

5 metre printer cables - £13.95

Keyboard extension cable - £9.95

Mouse extension cable - £11.95

2 to 1 25-way 'D' Data Switch - £21.95

4 to 1 25-way 'D' Data Switch - £35.95

2 to 1 36-way Centronics - £21.95

4 to 1 36-way Centronics - £37.95

Also Ultimate Expansion Systems etc.

This is only a small sample of our prices. Call or write for your free 64 page catalogue which includes educational and 8-bit software, as well as special offer details on complete computer systems.

Advance - £105

Aldebaran - £27

Almanac - £67

ArtWorks - £150

Axis - £22

Battle Chess - £26

Black Angel - £30

CADet - £158

Cycloids - £22

Demon's Lair - £22

Dungeon - £30

Elite - £38

Eureka - £117

Fervour - £22

F.R.E.D. - £19

Heimdall - £26

Hero Quest - £24

Impression II - £150

Oh No More Lemm - £16

Paradroid 2000 - £21

Populous - £22

Powermonger - £Call

ProCAD - £463

Prophet - £155

Prophet Demo - £10

Psycho Squadron - £Call

Quark - £22

S-Base Personal - £93

Serenade - £125

Sim City - £30

Sleuth - £55

Speedball 2 - £Call

Spheres of Chaos - £22

Squirrel - £147

Stunt Driver - £30

Technodream - £22

Virtual Golf - £30

Wordz - £105

WorraCAD - £93

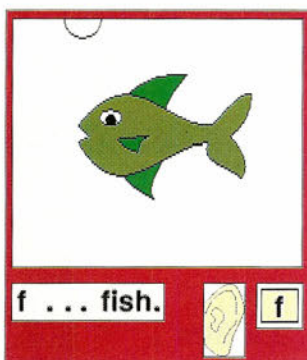
Zool - £22

This Genesis application from Oak Solutions sets out to teach very young children letter recognition and letter sounds. The letters appear in threes and fours on eight discs.

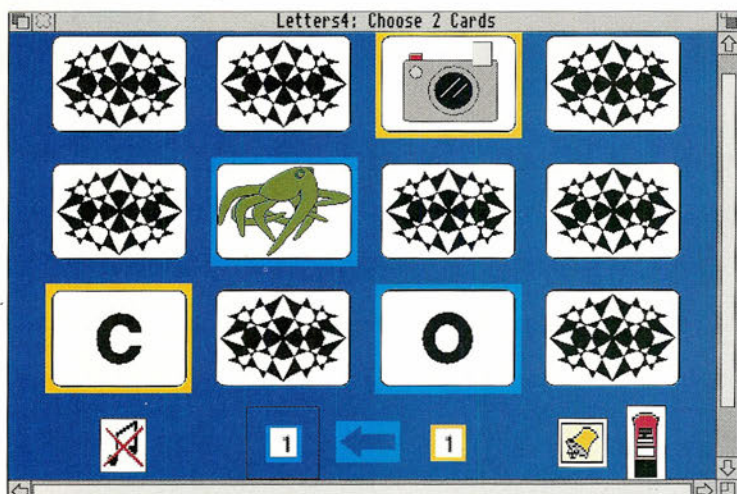
There is no set way of grouping letters and I have no complaint about the way it is done here. The 'stick letters', for example are l, t, i and j; the 'yo-yos' are r, n and m; c, o and a are 'roundabouts'.

Load a disc and you are presented with a choice of letters to click on. Make your selection and you opt for Look, Write or a picture of an eye, which stands for I spy.

In Look, a short animation shows your letter turning into an object which begins with it. Click on an ear icon and you hear the letter sound and relevant word. Write demonstrates how the letter is formed, again with a brief and clear animation. There are written and aural instructions. The eye icon brings up a picture. When you click on the objects with the appropriate initial letter, for example a cat, a camera and a cake, they appear at the bottom of the screen.



Demonstrating the use of a letter



A word game to make learning the letters fun

Spelling it out

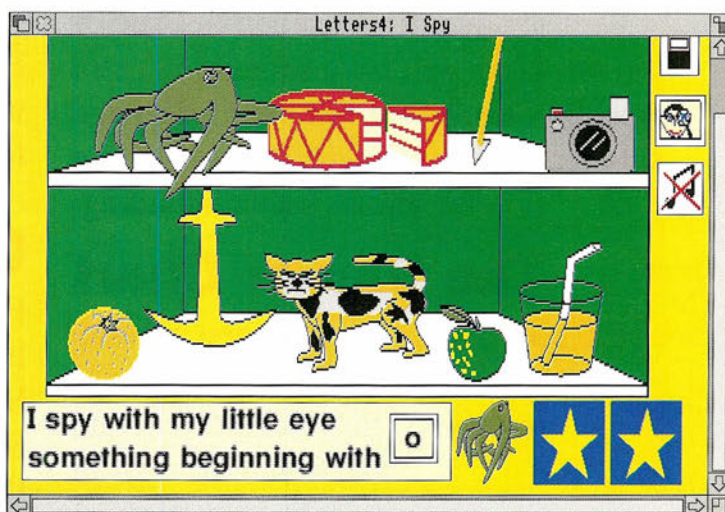
Alice Smith looks at Letters, a Genesis application which uses games and graphics to teach letter recognition to the very young

When you've worked through all the letters in the group, go back to the first screen and choose the Play option, symbolised, rather oddly, by a dice and shaker. Oddly because this is a Pelman game in which, playing against each other, children must match letters and objects.

A set of photocopiable worksheets is included in the package. There are four which associate each letter with two objects which begin with it, and then one for each letter, showing how it is formed and encouraging children to practise writing it.

The graphics are great. Bold, colourful illustrations are well suited to computer screens. On the whole, the animations are pretty good. However, I have two major reservations.

The first is to do with the

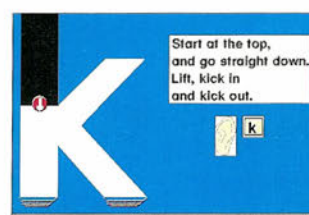


Bright, strong and colourful graphics work well on screen

way the letters appear on screen. Obviously approaches to handwriting and letter formation differ, but these letters have no 'tails'. To my mind, if children initially learn to construct letters with tails, when the time arrives to try joined-up writing it will come more naturally; their handwriting style will be more fluid.

My other concern is sound quality. Learning letter sounds correctly is so important that I'm not sure it should be left to a computer, particularly when the speech synthesizer is so inaccurate. The 't...t...t' which prefaces the enunciation of the word 'teddy' sounds like a pair of boots crunching in snow.

A letterbox motif is used throughout – you click on it to return to the previous screen – and the letters appear on envelopes. It's a minor criticism but I feel the dual meaning of 'letters' (those you make



Forming the letter shape

words with and those you post) could be confusing. Although it would have meant more discs, I also wonder why this resource stops with individual letters and doesn't cover blends and common letter groupings. Despite that, *Letters* is worth checking out. The idea is simple so you'll know if it is useful in your teaching.

Product details

Supplier: Oak Solutions
Tel: (0954) 211760
Price: £45 plus VAT

NEXT MONTH

BBC
ACORN USER

GAMES SUPPLEMENT

In a spirit of utter generosity towards all games players, next month's issue of *Acorn User* will have something extra inside. Check your issue for a 32-page supplement packed with the latest from the games scene including:

The Games Chart

Culled from the combined wisdom of our Games Editor, our games reviewers, the *Acorn User* team and hundreds of your fellow game players, we give you our exclusive chart

PLUS

What's hot: a look at some of the top game releases out in time for Christmas

DON'T MISS

your issue of
Acorn User

PLUS

Scanning it

Part two of our graphics series, we offer some imaginative ideas for you and your scanner

Omnidesk

For programmers, we have the best instalment yet of Omnidesk. SWI Index allows you to sort out your SWI calls and even puts you in touch with the correct PRM page. Useful stuff. And there's more . . .

PLUS

Publishing case study: another Acorn success story

15 new releases put to the test

To be sure of your copy, please fill in the coupon below and hand it to your newsagent. Or why not take out a subscription, which includes a gift pack. See The Subscriber's Page for details

DEAR NEWSAGENT, PLEASE ORDER MY REGULAR COPY OF BBC ACORN USER

YOUR NAME _____

ADDRESS _____

BBC Acorn User is published by Redwood Publishing, 101 Bayham Street, London NW1 0AG.
Distributed by BBC Frontline, Park House, 117 Park Road, Peterborough

CSS Computer Centre Acorn Education Centre Acorn Unix Centre

Acorn
The choice of experience

Showroom open 9-5.30
Six days a week
Training. Free fitting of add ons
Repairs and maintenance

SJ
RESEARCH

NEW: A3000, A4000, A5000 & Pocket Book now in stock

CUMBRIA SOFTWARE SYSTEMS LTD
Unit 3A, Townfoot Ind. Est., BRAMPTON
CUMBRIA CA8 1SW
☎ 06977 3779

Impression Resource Disc

With over a 100 borders, a range of useful clip art and a selection of hints and tips. £7.95
The Impression Junior Resource Disc as above with working borders. £7.95
The Ovation Resource Disc - contains extra borders, clip art, hints & tips etc. £8.95

Some of the 50+ Clip Art Collections
Christmas Collection (Draw or ArtWorks) £7.95
Europe Maps colour (Draw/compressed) £7.95
World Maps (Draw/compressed) £7.95
UK Maps (Draw/compressed) £7.95
World Houses (Draw/compressed) £7.95
The Pond Kit 2 disks - KS 3 to 'A' level £14.00

Parish Magazine - 3 disks of Draw files,
1 disc of KJ (AV) New Testament files

NEW The Church Year - an image for every
week, Saints' Days & festivals £16.98

Over 1800 clip art files now available - for A3000/A3010/A3020/A4000/A5000 & Archimedes machines

Send £1 for the free Auto-Catalogue &
ClearView/Sample disc (free with order)
Add VAT at 17.5% and £1 postage to
all orders.

See us at Stand 107 - Acorn World

The Art Works £8.95
Resource Disk **NEW**

The disc includes:
○ Function keystrip with undocumented keys
○ A ClearView help and hint and tips file
○ An illustrated keypress and help chart
○ Ready produced moulds
○ Difficult to draw shapes
○ Decorative clipart

DEC DATA **Acorn** **VISA**

Dep AU11, PO Box 97, Exeter, EX4 4YA Phone/Fax 0392 221702



Established
1983

BANK MANAGER

Complete and versatile personal accounts program. Consistently acclaimed!
'data entry is a delight...professional...excellent product'
'impressed...ideal...easy to use'

Enter cheques and receipts. Automatic date sequencing. Reconcile statements. Search, amend and delete. Analyze expenditure. Forward cash flow forecast. Budgets. Up to 36 bank accounts online, inter account transfers, 9999 standing orders, 99 analysis headings, unlimited postings (depending upon disk space). Reports to screen or printer. Mix foreign currencies, graphics, password, file recovery, field editing, programmable reports, Arc RAM disks, wild card analysis enquiries, sort and more.

Bank Manager £25.00

BUSINESS UTILITY

For the club accounts or small business user. Prints a "trial balance" or "P&L reports" via the programmable spreadsheet generator. Needs the Bank Manager. Saves hours of work.

Bus Util Pack £12.00

TYPING TUTOR

Quickly learn to touch type. Over 90 smoothly graded lessons graduate you from the basic home keys to complete keyboard mastery. Word scan or exact key checking, targets may be revised, rhythm metronome, key click, free format options. Recommended for adult education.

Typing Tutor £15.00

SPREADSHEET MK V

Low cost, versatile spreadsheet. 26 cols by 900 (Arch) or 99 (BBC B) rows, loaded with many functions and facilities inc programmable report writer and input scripts.

Spreadsheet MK V disk £15.00

Add £1 p&p per order (Overseas £3.50). Programs suitable for all Archimedes, A3/4/5000, BBC Master, Compact and BBC B series. State computer type (eg A3000, BBC B etc) and disk type (eg 3 1/2" or 5 1/4" 80 track or 5 1/4" 40 track)

CONTEX COMPUTING

(Ref AU), 15 Woodlands Close,
Cople, Bedford MK44 3UE



Tel: 0234 838347

ACORN USER ADVERTISEMENT PAGES NOVEMBER 1993

10/10.....45	CSS.....131	Kudlian Software.....118	Selective Computer Services.....132-133
3SL.....118	Cumana.....17	Liquid Silicon.....128	Selective Software.....132-133
4th Dimension.....64	Dabhand Computing.....72-73	Lindis International.....50,60	Senlac Computing.....112
Acorn Computers.....13	Dalriada Data Technology...132-133	Longman Logotron . IFC-1,11,62	Serious Statistical Software .132-133
Acorn World Show.....89	Datafile.....98	Matt Black.....122	Sherston Software.....56
AJS.....118	Datastream.....132-133	MEWsoft.....132-133	Simtec.....114
Alpine Software.....132-133	Dec Data.....131	Micro Discount.....112	Skyfall.....18,132
Alsystems.....44	Design Concept.....132-133	Micro-Studio.....114	SJ Research.....54
Arc Angels.....68	Desktop Projects Ltd...120-121	Micro-Bits.....78	Snap Computer Supplies...104
Apricote Studios.....116	Digital Services Ltd.....46	Minerva Software.....91	Soft Sector.....104
Arcaynia P.D.....132-133	Dixon & Dixon.....128	Morley Electronics.....52	Spacetech.....104
Arch Angel.....132-133	Electronic Font Foundry....125	Network 23.....68	SSERC Graphics Library132-133
Armtech.....44	Explan.....78	Norwich Computer Services.....77	Superior Software.....66
Atomwide Ltd.....79	Focus I.T.....94-95	Oak Solutions.....75	TDK.....126
Automatic Services.....18	Gamesware.....70	Oregan.....78	Technology Matrix.....112
Beebug Ltd.....21-23	Gnome Computers.....114	Penguin PD.....132-133	The Data Store.....122
Birdtech.....132-133	Greenware Ltd.....18	Pineapple Software.....108	The Serial Port.....122
Bowland Developments....OBC	HS Software.....132-133	QD Enterprises.....126	Turing Tools.....128
Calligraph Ltd.....96	Human Computer Interface .106	Quantum Software.....104	Vantage 1 Direct & Software Bargains.....28-29
Circle Software.....132-133	Icon Technology.....54	Really Small Software Company.....132-133	Watford Electronics.....38-44
CJ Computers.....132-133	ICS (Ian Copestake Ltd).....4-6,8	Risc Developments.....14,92	Wild Vision.....33
Clares Micro Supplies.....37	IFEL.....111		Wydffa Software.....132-133
Clove Technology.....18	Intelligent Interfaces.....116		
Colton Software.....IBC, 103			
Computer Concepts..81-88, 27			
Contex Computing.....131			
Crisis Software.....132-133			

SOFTWARE SHOWCASE

PUBLIC DOMAIN

SKYFALL PD

BIG CHOICE

No PD Library offers a choice of PD as wide as Skyfall does. So don't bother collecting other PD libraries catalogue discs. Send for the one that counts. And choose Skyfall.

Please send £1 for the Printed Catalogue & Demo Disc to:
PO Box 2220, B'ham, B43 5RZ.
 Enquiries: 021 358 7078.

P.P.-Pick up A Penguin

FONT SALE!

Risc OS 3 Font Packs 1 & 2 are now just £5 each!
 Over 50 fonts in each pack, exclusive to Penguin PD.
 Plus the 25th Person to order both will receive their order free of charge! Catalogue + Disk still only £1

PENGUIN PUBLIC DOMAIN
 PO Box 273, London SW4 7XB

Please make cheques payable to 'The DataStream'

THE DATASTREAM

Dept AU4, 34 Norbreck Close, Great Sankey, Warrington, Cheshire, WA5 2SX.

Special Offer Packs

Six Discs for only £3.99

Special Offer Number One - Starter Pack
 Catalogue & Bonus Disc (see below), A disc full of great games, a disc full of utilities and a disc of outline fonts and !Nirvana.

Special Offer Number Two - Games Pack
 Son of Gyrinus 3.5, Lemings, Invaders (2mb), Styx (now works on RISC OS 3) & more!

Special Offer Number Three - DRAW Clip Art
 Six discs of high quality DRAW Clip Art.

Send £1.00 for a copy of our latest catalogue or send £1.50 for a copy of our latest catalogue and an extra disc with around 1600k of compressed PD software including DinoSaw - the new game from the author of the top PD games Son of Gyrinus, Styx, Lemings and TBVG - Tom Cooper.

PUBLIC DOMAIN

Demo Pack 14

Arcaynia Demo Pack 14 includes:

- 16 Page PD Booklet
- Disc Crammed with new PD:
 - Arcaynia ArmCode Demo
 - Free Draw Clipart
 - BioRhythm Generator
 - New STD Database
 - Font Selection Utility
 - 2 Arcade Games
 - New Official Symphony Player
 - Exclusive Symphony Track

Send a £1 coin for your copy NOW!

Arcaynia
 PO Box 1927 : Sutton Coldfield : B74 3QZ

Arch Angel
 The PD Library

The No.1 Name In Public Domain

For all RISC OS 2 & 3 computers
 (inc. A3000/A5000/A3010/Archimedes)

We are still the only PD library with a true Pick 'n' Mix feature. The unique catalogue disc lets you select just what you want, and even calculates and prints the order for you! 1000's of files to choose from.

Send 4 1st class stamps to:

Arch Angel PD, PO Box 41, Exeter, EX4 3EN.
 Enquiries (0392)-422759

SOFTWARE/HARDWARE

Demonstrations of most of the available software on

Acorn Computers

We are an Acorn Specialist Dealer and offer

Sound Practical Advice - Demonstrations Daytime, Evenings and Weekends

Software - Memory Upgrades - Hard Disc Drives - Printers - Scanners

Academics - Teacher's - Student's Purchase Scheme - Mail Order Available

0% and Low Cost Finance Terms Available (Subject to Status)

Telephone Hot Line Technical Support - Spares and Repairs - Home Tuition

High Definition Scanning and Printing Service Available

Acorn Approved Dealership

SELECTIVE COMPUTER SERVICES

FAX/Phone (0332) 690691

MUSIC

Sound Advice

Complete music creation suite

£39.95 inclusive
 (£31.95 for education)

- 24 track, MIDI & internal sound system
- Easy to use grid based editor
- Edit existing samples or create new ones

RISC OS 2.00 & above. Works with 1M or more

To order, or for more details: **Really Small Software Company**
 Olivers Hill, Ashburnham, Battle, Sussex, TN33 9PE

DTP

Someone's just got their copy of

TableMate

- Quick and easy to use - special features save hours of effort!
- Tables can be saved in Draw or Impression II & Junior formats
- Only £22-50 inc. P&P

"I found the application very easy and intuitive to use"... "extremely flexible" - Archive, May 93

Dalriada, 145 Albion St, KENILWORTH, Warwickshire, CV8 2FY. (0926) 53901

COLOSSAL

The exciting new art program from Crisis with LOTS of tools - special release price of just £10(inc.!!) Cheques / P.O.s to Richard Adams, The Tannery, Maudlin Rd., Tolnes, Devon. TQ9 5EX - (0803) 862189

Crisis SOFTWARE

TAKE NOTE - SERVICES FOR "YOU"

We convert your photographic slides, photographs, sketches, paintings, prints etc. to sprites (also Tiff/Jpeg etc.) for use in your Acorn computer via the top off the range Epson GT8000 scanner from Irlam Instruments. Colour, 256 grey and mono scans to A4 size (slides/transparencys to 5"x5") at up to 800 dpi, only £1 each fully inclusive for lightweight items. We can supply discs for scans at 40p DD & 65p HD. Also colour prints from the HP550C at £2 each and Laser Direct 600dpi printing £1 for first print, subsequent prints 20p each. Tel. 0263 70 669 (9am/9pm.) or send sae if you require further details. Fax. 0263 70 669. Professional service, club prices. Birdtech, 16 Weynor Gardens, Kelling, Holt, Norfolk NR25 7EQ.
 (please note for future reference our services are very cost effective so advertising is limited)

At last, a

Predictive Typer

for the Archimedes!

PenFriend allows less able users to type in their favourite word processor, much faster and with less movement than before. Ask for our free catalogue.

Design Concept
 Design Concept, 30 South Oswald Road, Edinburgh, EH9 2HG (031) 668 2000

HOW TO ADVERTISE

The Software Showcase is an extremely cost-effective means of advertising for small businesses.

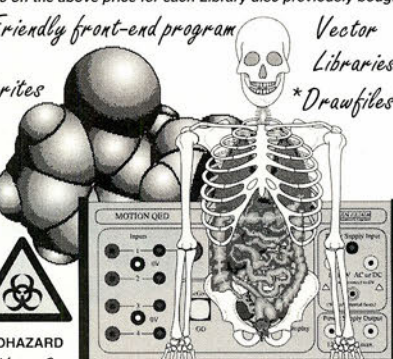
For further information, contact:
 Jonathan Hull on
071-331 8142

SOFTWARE SHOWCASE

EDUCATION

SSERC SOFT 93 Software for
Serious Science & Technology
THE SSERC GRAPHICS CD-ROM
For CHEMISTRY, PHYSICS, BIOLOGY, TECHNOLOGY, I.T., COMPUTING.
One price = £150 for a full school licence
Existing users of our Graphics Libraries qualify for a discount
of £3 off the above price for each Library disc previously bought.

* Friendly front-end program
Sprites
Vector Libraries
* Drawfiles



BIOHAZARD
* New Graphics
* Programs

plus Helpfiles, Draw Practical Guides, DXF files, Text-Path, Interfacing data and more.
SSERC, 24 Bernard Terrace, Edinburgh EH9 9NX Tel. 031 668 4421 or Fax. 031 667 9344
Please make all cheques payable to SSERC
or SAE (£1 please) for full information pack. Add VAT above.

EDUCATION

LPINE SOFTWARE
PO Box 25, Portadown, Craigavon, BT63 5UT.
Tel/Fax 0762 342510 (Access/Visa welcome)

Creator II is the latest version **£49**
of our popular *Games Designer*. Features include
animated sprites, music and sound effects, screen and
map designers, paths, bargraphs, scroll text, starfields,
platforms, ladders, doors, 100 page User Guide etc. So,
whether you want to produce a fast-action blast, a
challenging platform game, or even a cool demo,
Creator II is what you need. What you **don't** need is
programming experience! Add ons: *Music Discs 1-5*
£1.50 each, *Sound FX Disc 1* and *NEW Disc 2* £5.00
each, *Sprites* £5.00, *UltraSonic Music Editor* £30.

Other products: *ALPS* adventure creator £34.95,
Cyborg £25.95, *NEW Adventure Collection* £15,
NEW Explorer educational space game £30.

Why not send a blank disc and 36p SAE for our
NEW Product Guide/Demo disc?
Add £1.00 towards p&p. EC £2.50, Outside EC £4.50

STATISTICS

**STATISTICS
FIRST
IS NOW
MULTI-TASKING!**
Our new enhanced products
1st and 1stJR
Have been released
New Product
1st L (eLementary)
imminent
For full information
contact
Serious Statistical Software
Lynwood Benty Heath Lane Willaston
South Wirral L64 1SD
Tel: 051 327 4268

Talking Programs
See us on
stand 94 at
Acorn
World '93.

Programs that
use real speech
to stimulate
speaking and
reading (Pre
reading and KS1).

"A thoroughly recommended
pair of programs" - BBC
Acorn User

Wyddfa Software Coming Soon:
Talking Stories

Talking Pictures and The Spoken
Word are £20 inc. VAT from
Wyddfa Software, FREEPOST
CS50A, Caernarfon LL55 4BR.
Tel (0286) 870101 Fax (0286) 871722

Fun & Games NEW!
£22.95
A3000,
A5000 &
Archimedes

"T.V. Fun & Games" - 3 National
Curriculum games for ages 5 to 9
Come and see us on **STAND 118**
HS SOFTWARE, FREEPOST, SWANSEA
SA2 9ZZ. TEL : (0792) 204519

DATABASES

Impact-Pro! NEW!
The Professional Database
A new **fully relational** database
with many new features

**Impact-Pro offers the same
easy to use format as Impact!
but with features for the more
demanding user.**

If you use Impression, you
must have Impact-Pro

Impact-Pro **Circle Software**
£65.00 + vat 33, Restrop View
Purton, Swindon
SN5 9DG
Impact! now -
£39.95 + vat Tel: 0793 770021

MEWsoft Diet Manager Extra
Forms Suite Plus

The Diet Manager is the only diet analysis package which uses the power of the RISCOS to
make it easy to monitor your diet. Rightly popular with the home user concerned with diet it
is also ideal for schools and in particular for coping with the Home Economics option of the
Technology SAT. The Diet Manager Extra includes the following features:

- Extra information window with data on selected Vitamins and Minerals
- A separate application for editing the food database (including minerals and vitamins)
- A targets window showing the current targets (RDI).
- Improved printout facilities.

Also from MEWsoft: Forms Suite Plus
THE package for designing and printing A4 Forms with
lines, boxes, grids (such as registers, marksheets, etc)
Forms Suite Plus includes calculating facilities, Draw
and Sprite graphics, Draw File save, and more.

£55 inc p&p
MEWsoft
11 Cressy Road
Hampstead
London
NW3 2NB
Tel: 071 267 2642
Fax: 071 482 6452

(For upgrades phone MEWsoft) £55 inc p&p

SPECIAL NEEDS

New! for the A3000 to A5000
NUMBER ZOO
A first number program.
Features 4 early skill games,
plus a matching pairs game.
Excellent value. Only £16.45 incl.

Selective Software
64 Brooks Road
STREET, BA16 0PP
Tel (0458) 43079

Computing
Your Southwestern Acorn Dealer

Repairs
Special Needs
Educational Dealer
Latest Hardware and Software

Open Day
1pm - 8pm on 21st Oct

57 Westbury Hill
Westbury-on-Trym
Bristol BS9 3AD
Tel: (0272) 624553
Fax: (0272) 490901

HOW TO ADVERTISE

The Software Showcase is an
extremely cost-effective means of
advertising for small businesses.

For further information, contact:
Jonathan Hull on
071-331 8142

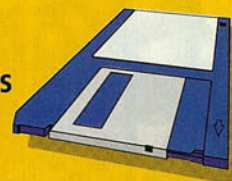
SUBSCRIPTION OFFER

Take out a year's subscription to Acorn User, the best-selling Acorn magazine, for just £35.40
and receive all this . . .

★ 12 ISSUES OF ACORN USER DELIVERED POST FREE EVERY MONTH

★ THE MONTHLY ACORN USER COVER DISC

Packed with games, education resources, helpful utilities and complete applications



PLUS

THE ACORN USER HANDBOOK

Get the most from your machine with this indispensable guide 48 pages of . . . time-saving tips . . . jargon busting . . . key shortcuts . . . software advice . . . hardware options . . . plus a beginner's guided tour



PLUS

CHOCKS AWAY

A complete game

This classic game from leading games company, Fourth Dimension, combines flight simulation with gripping arcade action. Chocks Away sees you flying in a red Tiger Moth over landscapes and seascapes, blasting everything in sight. You can fly solo missions or with a friend: either way this rates as one of the all-time greats



PLUS

THE ACORN USER SHAREWARE COLLECTION DISC

Featuring some of the best shareware around, including . . .



ZAP: One of the best file editors

PROCESS: Scratch, ripple and twist with this brilliant image-processing package

HACKER: Hack into your favourite game

BLACKHOLE: Tidy up with a desktop dustbin

AND 13 OTHER SUPERB APPLICATIONS

ARMCode, AutoFocus, FastBrot3, FileTree, InfoScoop, Makro, Mode, ModeView, Postcalc, PtrWrap, Status, WinCtrl, XHelp.

PLUS

THE ACORN USER EDUCATION DISC

Packed with classroom resources, this disc has a range of materials that explore all areas of the curriculum. The disc includes classroom posters, a selection of European maps and many complete lesson resources to use with popular applications.



Use the dinosaur clip art in *Datasweet*, tackle data collection with ready-made forms for *Junior Pinpoint*, discover probability using *Eureka*, teach letter recognition with *My World* examples and much more.



Call our subscription hotline
(0483) 727762



THE ACORN USER HANDBOOK

Available exclusively to Acorn User subscribers

Getting to know your machine is a vital part of learning to use your Acorn computer to its full potential, but who wants to wade through piles of manuals to get at the hard facts?

The *Acorn User Handbook* is a 48-page guide to getting the most from your computer, with five major sections covering every aspect of your machine.

Understanding the hardware beneath your computer's bonnet is vital if you are to understand how the computer actually works. The hardware section of the handbook examines all the components of Acorn computers from processor chips to floppy disc drives to expansion ports.

For all those thinking of expanding your computer, there's an in-depth look at all the peripherals available, such as printers, modems and scanners: decide what you want with our expert guidance.

Risc OS is the most important part of using an Acorn as far as most people are concerned, and the most

Finding your way round the desktop

The Pinboard. You can drag any files, directories or icons to the Pinboard, and they will stick there. The Pinboard acts just like the normal Filer, but deleting icons does not delete the files themselves: the Pinboard icons are just pointers to the items on disc. You can save the state of the Pinboard, or include the details in a boot file so your favourite applications appear every time.

A directory window, or Filer window. From this window you can access files on disc. Visible in this window are a boot file, a font folder, the scrap directory, the system directory and a number of directories. The title of the window shows the filing system (ADFS), the name of the disc (HardDisc) and the directory being shown (S - the root directory). Clicking Menu over this window brings up the Filer menu, which looks like this:

Filer
Display
Selection
Select all
Clear selection
Options
New directory
Open parent

Device and filing system icons appear on the left-hand side of the iconbar. Devices represent printers, faxes and so on: hardware add-ons to which files can be sent. Filing systems are for file storage and include hard discs, floppy discs and the Ram disc. In this example, from left to right, we have a hard disc (called HardDisc), floppy drive 0, the resources filing system and the Ram disc. The resources filing system contains the Rom applications and the built-in fonts (Corpus, Homerton and Trinity). Clicking Select on a filing system icon brings up a directory window for that system, and clicking Menu brings up a menu relevant to that system; on the right is the menu for floppy drive 0.

Page 24

A typical desktop window. In this case it is a document in an editor (*Impression*). This particular window has cream-coloured icons, which means it has the input focus: any keys pressed will be reported to this document, and any function key-presses will relate to *Impression*. The window could be iconised onto the Pinboard by clicking on the close icon with SHIFT held down; an icon would appear on the Pinboard, and double-clicking on that icon would bring the window back.

Back: click to put window to back
 Close: click to close window
 Toggle: click to toggle window size
 Size: drag to alter window size
 Scroll arrows: move around document

Application icons appear on the right-hand side of the iconbar. In this screen shot the applications from left to right are: *Help*, *Draw*, *Edit*, *Paint*, and *Impression*. The two on the right (*Palette* and the *Task manager*) are special, and are described below. Click Menu over any icon to bring up an iconbar menu, which will include the Quit option to kill off the application. Not all applications install themselves on the iconbar in this way, but the vast majority do.

The *Palette* application lets you change the screen mode and colours on the desktop. Click Menu to bring up the menu: the Mode submenu allows you to change screen mode. Click Select to bring up the palette editor window (shown right).

The *Task manager* forms the crux of the desktop's memory management system. Click Select on the icon to bring up the Tasks window, showing the memory allocations for such items as the font cache, Ram disc, screen memory, the module area and all the applications loaded. From the iconbar menu you can save boot files (see page 23), create task windows, and shut the system down.

Page 25

Find your way round the most important parts of your machine with the *Acorn User Handbook*

important aspects are covered, along with loads of hints and tips to help you use your computer more efficiently. The desktop is dissected, there's a detailed look at optimum

configuration settings, an explanation of all those error messages which crop up, and how to avoid them; the list goes on. Read this section, and you'll find the desktop far

more friendly than you thought it could be.

Software makes computers as powerful and as popular as they are, but the range of Acorn software is daunting. Thinking of buying an art package, or a decent word processor? The handbook explains all the categories you'll come across, and tells you the most popular products you should be thinking about.

The final section is potentially the most valuable of all: the one-and-only Acorn Glossary. Jargon-busting is the trickiest part of getting to grips with computing, and with the handbook by your computer you'll be able to understand phrases like 'clock speed of 33MHz' and 'Risc Chips execute machine code instructions faster than Cisc chips'. Invaluable, and fascinating reading.

Illustrated with colour pictures and photos

throughout, the *Acorn User Handbook* will turn you into a power user who can really use Risc OS machines. Don't get left behind: read the only manual that matters.

Subscription form for Acorn User

1 ☐ Please enrol me as a subscriber to *BBC Acorn User* magazine (£35.40 for 12 issues)

All subscriptions will commence with the next available issue

My surname (Mr/Mrs/Ms)

First names

Address

Postcode **Telephone**

2 I enclose a cheque/postal order for £ for subscription(s) made payable to BBC Acorn User or Please debit my ☐ Access ☐ Visa

Expiry date

Card no.

Signature **Date**

3 Now send your completed form and payment to BBC Acorn User, PO Box 425, Woking, Surrey GU21 1GP. This offer closes on 30 November, 1993. Back issues are also available. Please state if credit card billing address is different from delivery address. Photocopies or handwritten versions of the above information are acceptable, but please quote the code below. Contact the number below for subscription rates outside the UK. Redwood Publishing offers you the chance to receive information about other organisations goods and services. Please tick the box if you prefer not to take advantage of this. ☐

Message to existing subscribers: if you would like to renew your subscription early to receive these free gifts, please call (0483) 727762

THE MOXON INTERVIEW

CHRIS ROLPH

There's no doubt about it: lasers are hip. From laser light shows to laser printers, we can't get enough of them, and Laser Grafix of Royston knows this better than most people.

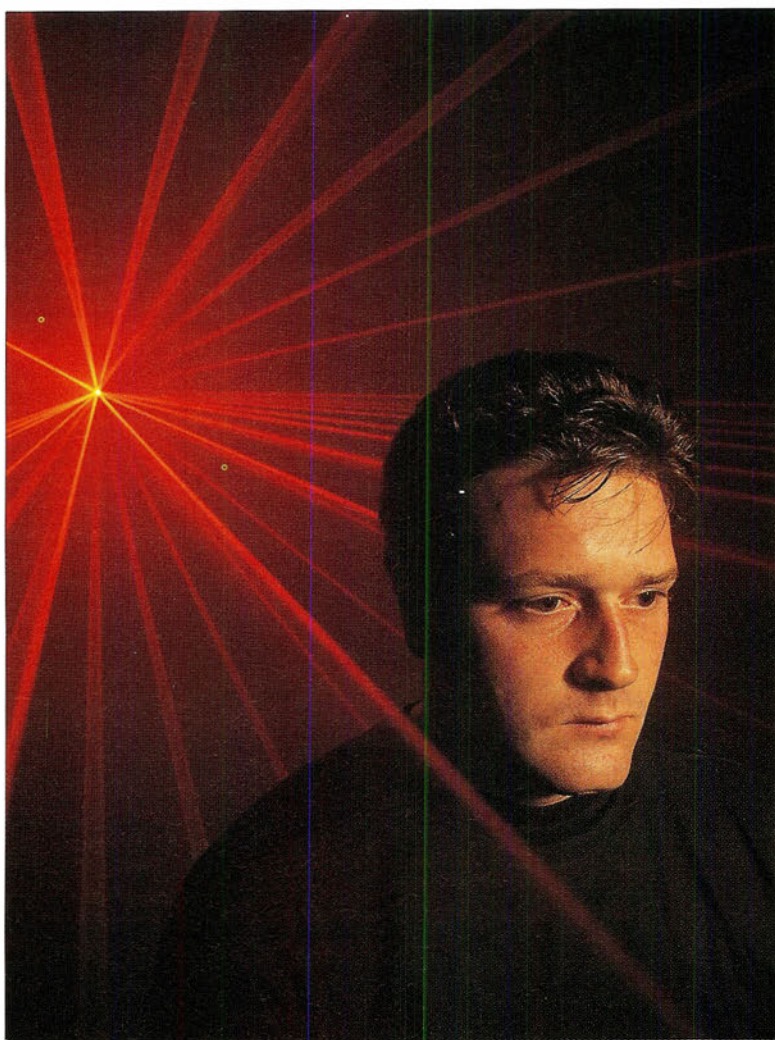
'Most people don't seem to realise that a laser is just a beam of light,' says Chris Rolph, sales manager of the three-and-a-half year old company, now the UK's biggest entertainment laser company. 'It's what you do with that beam of light that makes a laser show what it is.'

And Laser Grafix certainly knows what to do with it: both Deep Purple and Elton John used Laser Grafix for their lasers on their last tours, and a large number of nightclubs – including the Camden Palace and Leicester Square's Hippodome – have equipment designed and installed by the company. But what a lot of people don't know is that behind the breathtaking effects and flashing lights lies an Archimedes, running Laser Grafix's award-winning Prisma system.

So why did Laser Grafix choose to base one of its most prestigious systems round Acorn equipment, rather than the more standard PC?

'Well, we used to use an American product to control the lasers, but it wasn't too user-friendly,' says Chris, 'so we started to look around for an alternative platform on which to base the processing side of a laser system.'

'The obvious choice would have been an IBM, but when we saw the Archimedes – an A440 in those days – the very fast processor speed and Risc OS, we knew that was what we were looking for.'



'We saw the speed of the Arc and knew it was what we were looking for'

So the Prisma system was developed. These days an A5000 is used, fitted with a specially-designed Laser Grafix expansion card. This hooks up to a laser controller, which looks like something out of a mad scientist's laboratory; a collection of mirrors, filters and motors is controlled by the Archimedes to reflect the light from a single laser into patterns, animations and all

sorts of weird and wonderful effects. Coupled with the Prisma software package, whose internal workings are a closely guarded secret, it's a setup which clubs have found very attractive.

'We've sold about 35 complete Prisma systems so far,' Chris explains, 'which represents quite a considerable turnover. If you ignore the actual lasers – which we don't

manufacture ourselves – then the system comprises an A5000, the special expansion card, Prisma control software, a laser controller and a special control box to replace keyboard and mouse, so non-computer users don't have to wrestle with the mouse. This alone costs around £20,240: laser systems are not cheap. When you add the laser, which can cost £25,000 for a 4.5W white laser, you're talking serious money.'

You could say that. Chris must have some serious faith in the A5000 to sell it as part of a system that is this sophisticated.

'We like the Acorn system,' he says. 'There isn't any point in spending a fortune designing and producing your own computerised control system when there are machines this powerful and this affordable around to do the job for you.'

'Another point about the Acorn is if we produced an IBM-based system, we wouldn't be able to sell the system as a whole as most people already have

PCs: they would simply buy the card and software and plug it into their own computers, which isn't what we want.'

And in case you don't go clubbing much or aren't keen on Deep Purple, you'll get your chance to see Laser Grafix in action at Acorn World. The Games area will have its own laser show, powered by Acorns. Will it be any good?

'Well, it will look rather small compared to some installations we've done,' Chris admits, 'but the public will love it. And when they discover there's an A5000 behind it, they'll be impressed.'

Too right. More interesting than a laser printer any day.

ALISTAIR MORRISON

New from the Archimedes' spreadsheet experts comes Resultz, the ultimate spreadsheet for RISC OS.

It's packed with powerful features to help you work fast, whether you're working on a classroom project or managing your business.

It recalculates faster than any competitor, and uses background recalculation so that you're never waiting for the computer to catch up. It will automate your work with the *Fill* and *Autosum* buttons - just select a group of numbers and Resultz writes a formula which adds them up automatically.

Resultz isn't just for power users. It's designed to help novice users work productively.

Interactive help makes it easy to use

Resultz' comprehensive set of functions.

Every time you pick one of

the 190 built-in functions

from the

selector,

tips on using

it appear on screen.

Your data will look better

than ever, with colourful

charts incorporating your

own pictures.

Unlike other

spreadsheets,

Resultz shows your

pages on screen, so what

you see on screen is exactly what

will print out on

the page (we call

it *spreadsheet DTP*). The style editor

places fonts and formats at your

fingertips. It's easy to build

tables and forms, and to

add charts or pictures to worksheets.

And Resultz is just £119+VAT.

Resultz and Wordz are the first members of the FireWorkz

suite of programs, designed to share

the same intuitive easy-to-use

interface, and to make it easy to share

data between

word processor,

database

and

spreadsheet.

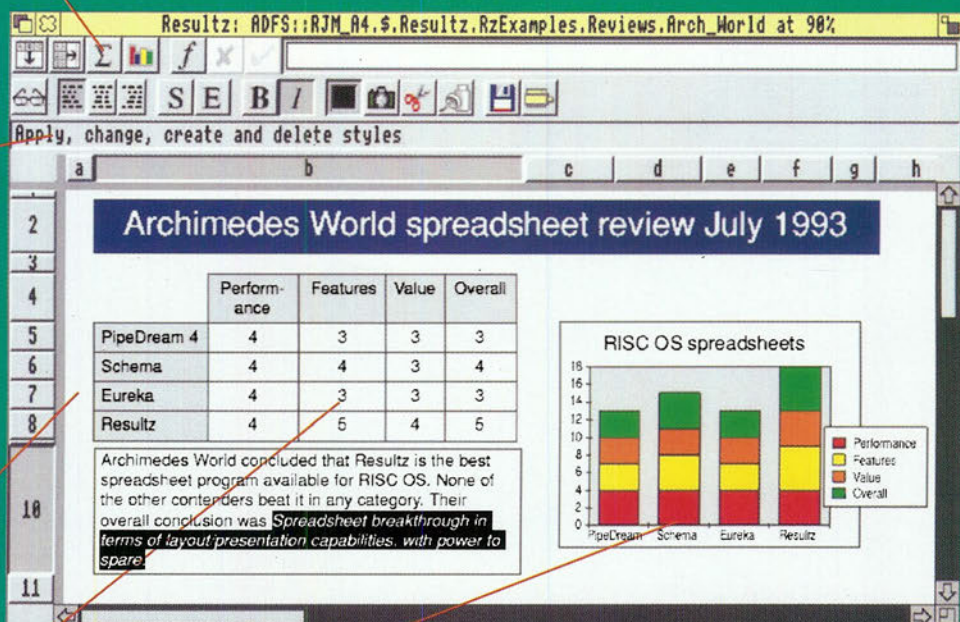
...when you need Resultz, send for your free brochure and demo disc

name

address

postcode

AU/11/93



resultz

COLTON software

2 Signet Court, Swanns Road,

Cambridge CB5 8LA

Telephone 0223 311881

Fax 0223 312010

Le Copier

Diskette Handling Device

**DESIGNED AND BUILT IN
BRITAIN.**



ORDER NOW

ON

0480

861186

OR FAX

0480

860856

Price includes machine,
Archimedes copy software,
floppy drive and cables.

Price £1245 plus VAT
including 12 months
warranty.

Second and third
year warranty £160
plus VAT.

Rent from £1-68 per
day including 3 years
maintenance.



Boland

Unit 10, Brook Road, Bicton Industrial Park, Kimbolton, Cambridgeshire PE18 0LR.